Cinedeck Extreme User Manual

Cinedeck Extreme User Manual V 2.04

About this manual

Important!
This manual reflects the state of the Cinedeck Extreme hardware (1.0) and software (2.0) at the time it was published. It will be updated frequently as new features are implemented, and will not necessarily reflect legacy information. Legacy versions of the hardware and software would be covered by the manual included with that release.

What's in the manual
This user manual describes the functions available in the Cinedeck software, as well as relevant information regarding upgrades, hardware information such as pin definitions for connectors, interaction with 3rd party software such as NLEs, and further technical information of interest to users.

The manual is divided into 4 parts

1) Table of contents.

2) General introduction to the Cinedeck Extreme

3) Menu function descriptions and notes

4) Appendices with processes for various tasks related to maintenance and updates, as well as technical information, drawings, best practices notes and FAQs.

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DNxHD is a trademark of Avid Technology, Inc.
Windows is a trademark of Microsoft Corporation

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What's included

In addition to the Cinedeck Extreme recorder, everything you need to get started is included in the custom Pelican case, including media if you purchased any with your Cinedeck.

Please check to ensure that all expected contents are in the case. In the event that anything is missing, please contact support@cinedeck.com

Pelican Case

Base stand

WiFi antenna

WiFi antenna

3pin Lemo to 3pin XLR audio cable

Wall power supply with localized power cord

2pin Lemo to 4pin XLR power cable

USB cable for HDD dock

ESATA cable for HDD dock

HDD dock

Power supply with localized plug for HDD dock

USB thumb drive

Safety information

CAUTION: The Federal Communications Commission warns the user that changes or modifications to the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC: This equipment has been tested and found to comply with limits for Class B digital device pursuant to Part 15 of Federal Communications Commission (FCC) rules.

CE: This equipment has been tested and found to comply with the limits of the European Council Directive on the approximation of the law of the member states related to electromagnetic compatibility (89/336/EEC) according to EN 55022 Class B.

CC and CE Compliance Statement

These limits are designed to provide reasonable protection against frequency interference in residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed or used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in television reception, which can be determined by turning the equipment off and on. The user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which receiver is connected

WARNING: Take care of your Cinedeck EXTREME as you would your cameras or other electronic equipment. Take care especially to keep water and moisture away from the unit. Getting your Cinedeck EXTREME wet will void the warranty. AND COULD CAUSE ELECTRIC SHOCK.

WARNING: The Cinedeck EXTREME needs ventilation for safe operation. DO NOT block the fan at the rear of the unit. DO NOT lay the unit down on its back, thereby blocking the fan. Blocking the fan will damage the unit, causing it to overheat, and it will void the warranty.

MORE INFORMATION IS AVAILABLE AT WWW.CINEDECK.COM/WARRANTY

Support information

Support Hours:
Support office hours are 9am-6pm EST, but we generally answer email from 8am to midnight EST, 7 days a week, and at odd hours of the night.
The direct support email address is: **support@cinedeck.com** *and we do answer email within minutes.*

Phone support can be reached at **+1-646-642-6985.** If you do not reach us, *please do leave a message*, as we endeavor to return calls within a few minutes within the expanded hours noted above.

Please Note!
It is generally both helpful and essential to have as much information as possible about the nature of the problem and the setup involved, including all equipment being used, camera settings, Cinedeck settings, etc.

For instance, if you are using an esoteric piece of equipment in the signal chain, it is critical that we know so we can make a correct diagnosis.

First line troubleshooting, hardware.

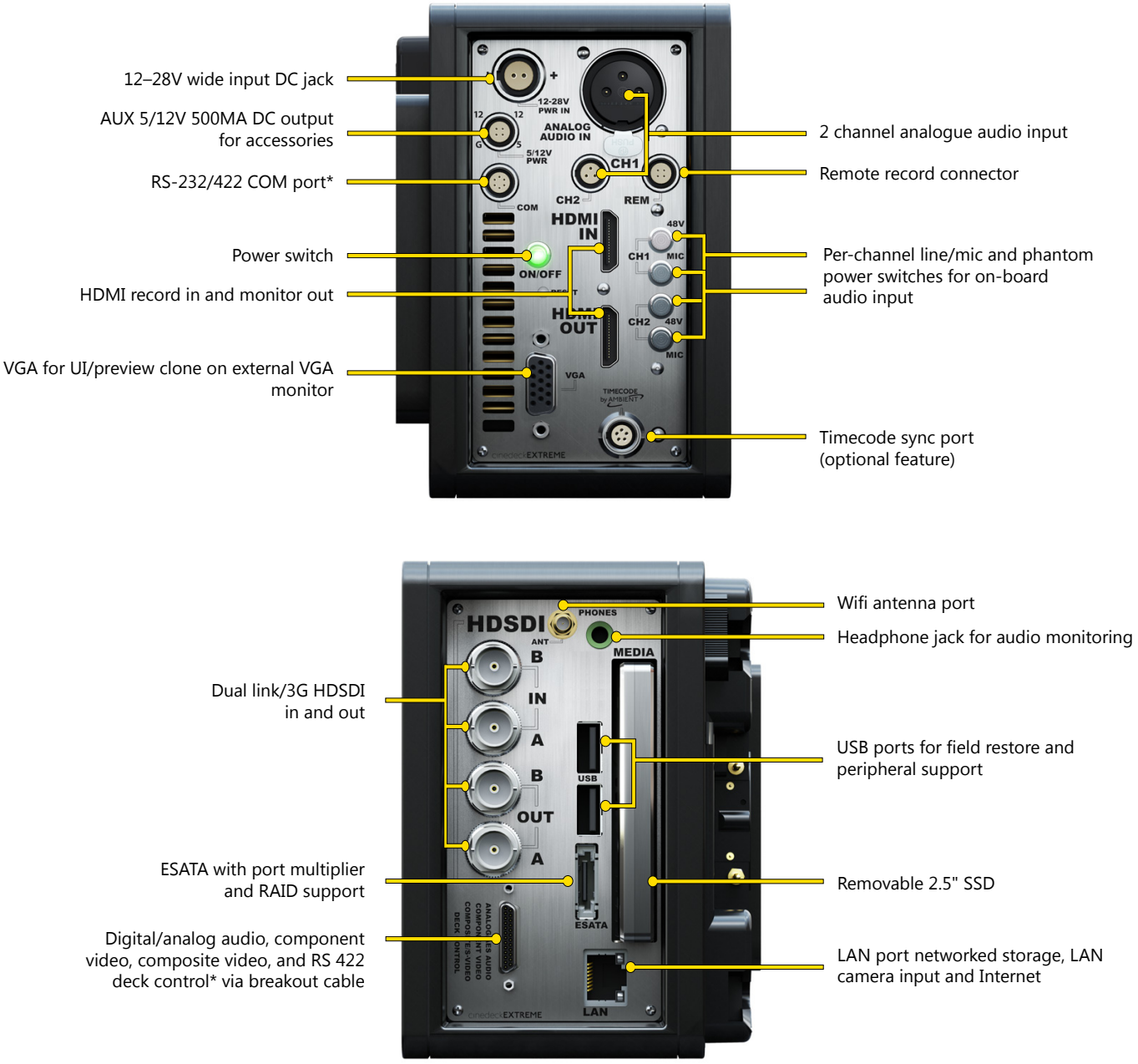
Is it plugged in?
Often the simplest things can make life difficult...always check the basics!
Is the power supply plugged in? battery charged? camera turned on? camera settings correct?

First line troubleshooting, software.

Have you matched your camera settings?
Often the simplest things can make life difficult...always check the basics!
Is the camera set to P and the Cinedeck to PSF? Is the camera actually a 24p signal, or 59i masquerading as 24p via pulldown?

NOTE: Take care of your Cinedeck EXTREME as you would your cameras or other electronic equipment. Take care especially to keep water and moisture away from the unit. Getting your Cinedeck EXTREME wet will void the warranty.

Hardware I/O


12–28V wide input DC jack
AUX 5/12V 500MA DC output for accessories
RS-232/422 COM port*
Power switch
HDMI record in and monitor out
VGA for UI/preview clone on external VGA monitor
2 channel analogue audio input
Remote record connector
Per-channel line/mic and phantom power switches for on-board audio input
Timecode sync port (optional feature)
12-28V PWR IN
ANALOG AUDIO IN
5/12V PWR
CH1
CH2
REM
COM
HDMI IN
HDMI OUT
ON/OFF
48V
MIC
VGA
TIMECODE by AMBIENT
cinedeckEXTREME
Wifi antenna port
Headphone jack for audio monitoring
Dual link/3G HDSDI in and out
USB ports for field restore and peripheral support
ESATA with port multiplier and RAID support
Removable 2.5" SSD
Digital/analog audio, component video, composite video, and RS 422 deck control* via breakout cable
LAN port networked storage, LAN camera input and Internet
HDSDI
ANT
PHONES
MEDIA
B
IN
A
B
OUT
A
USB
ESATA
LAN
ANALOG AUDIO
COMPONENT VIDEO
S-VIDEO
DECK CONTROL

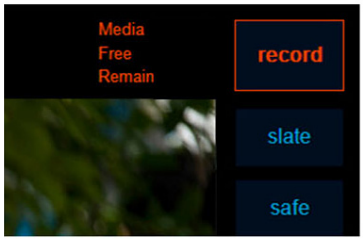
Basic operation

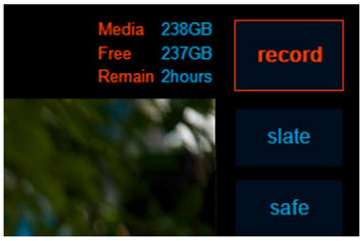
Loading the SSD media

NOTE: An SSD is not included in the Cinedeck EXTREME kit. It must be purchased separately. Please contact your dealer or email us at orders@cinedeck.com for more information.

On the i/o panel on the right side of the Cinedeck EXTREME, you will see the slot for the SSD media. Slide the SSD into the slot with the SSD connectors facing towards you.

Once the Cinedeck EXTREME recognizes the SSD, media information will appear in the upper right hand corner of the screen.





Warning: Only SSD media purchased from Cinedeck are ready to use. Other SSDs must be prepared following the directions on page 9 to prevent error and data loss.

Cinedeck certified Batteries

Note: The Cinedeck requires high capacity, high drain batteries. The following batteries have been certified for use.

IDX: HL9, HL9S, HL10, HL10S, Endura Elite
Anton Bauer: Dionic HC & HCX

Powering up the Cinedeck

Note: we recommend that when you power up your Cinedeck EXTREME via the AC adapter, power brick, or battery for the first time, you confirm that the voltage falls within the input range of 12 to 30V.

To safely disconnect the LEMO connector from the device, you must slide the sleeve of the connector and then gently tug to remove the connector from the Cinedeck EXTREME.

IMPORTANT: There is a SAFETY LOCK on the LEMO connector to prevent it being accidentally removed from the Cinedeck EXTREME. DO NOT pull any part of the AC Adapter other than the sleeve.

Turning on the Cinedeck Extreme:

The POWER BUTTON is located on the i/o panel on the left side of the Cinedeck EXTREME.

Press the POWER button and a green light will appear indicating it is ON. A blue light on the bottom right hand corner on the front of the Cinedeck EXTREME will also be illuminated.

The Cinedeck EXTREME boots in approximately 45 seconds. A full on-off power cycle is approximately 55 seconds.

Hotswap of power input

NOTE: It is possible to switch between the AC Adapter and the batteries without turning off the Cinedeck EXTREME.

User Interface

General notes about the user interface

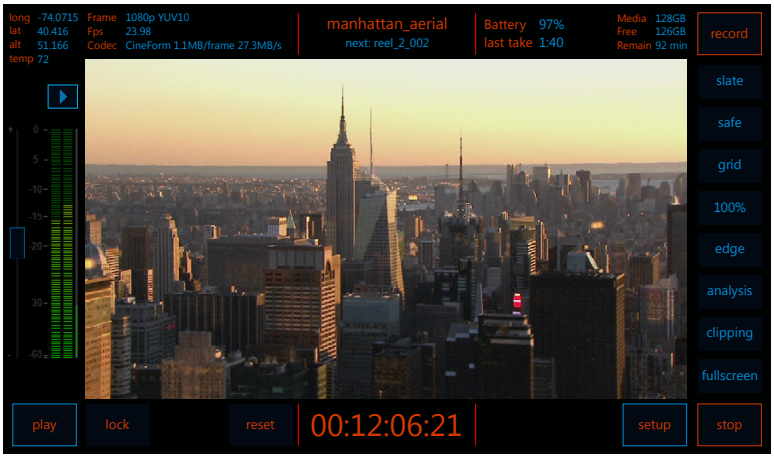
The user interface has been designed with use in high pressure situations in mind, where a minimum of interaction is desirable to operate the Cinedeck and in normal operation, every tool commonly needed is readily at hand.

Most commonly used tools are accessible within one touch from the main screen. The touchscreen is the main control surface for the interface, but there are also physical buttons for commonly used functions while in full screen preview mode.

Active (on) buttons are indicated by [text] and inactive buttons are indicated by {text}

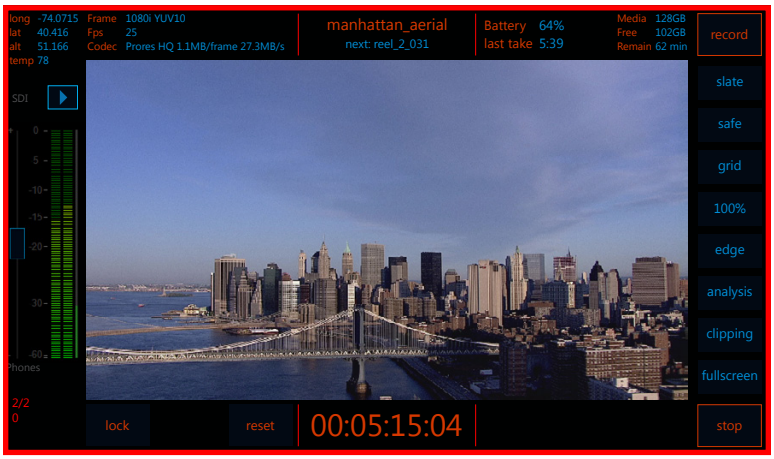
Main user interface (recording)

The main user interface is the record screen, which includes displays with relevant information for the current input and output settings, project, scene and take names, timecode display, and access to all commonly used tools.



Touching information displays will take the user to the relevant setup menu. ie touching the timecode display invokes the timecode setup menu. This is typical for most status and information displays.

During record, there is a bright red border around the preview image.

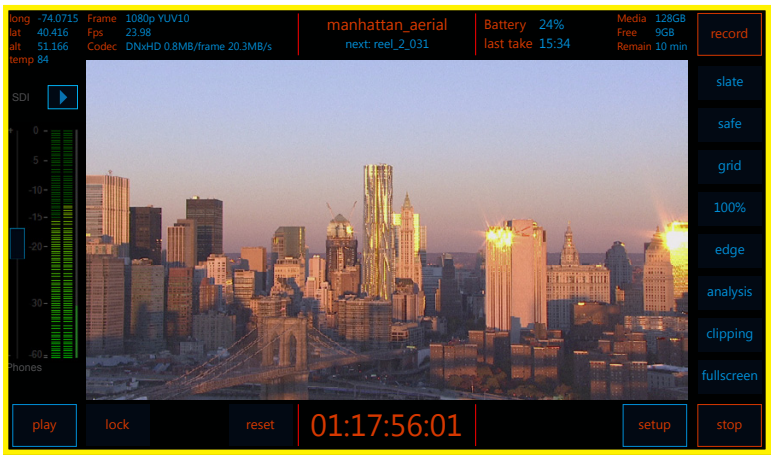


Buttons that are inaccessible such as [play] and [setup] disappear.

Certain dynamic information displays that are only relevant during record appear, such as data rate and system resource usage, buffer status, and disk wait time display.

This border will begin to flash bright yellow when there is approximately 10GB of space remaining on the media.

When there is less than 2GB of remaining space, recording will stop automatically.



Main user interface, cont.

Record start [record]

To prevent accidental recordings, the button must be held down for about 1/2 second before record will engage.

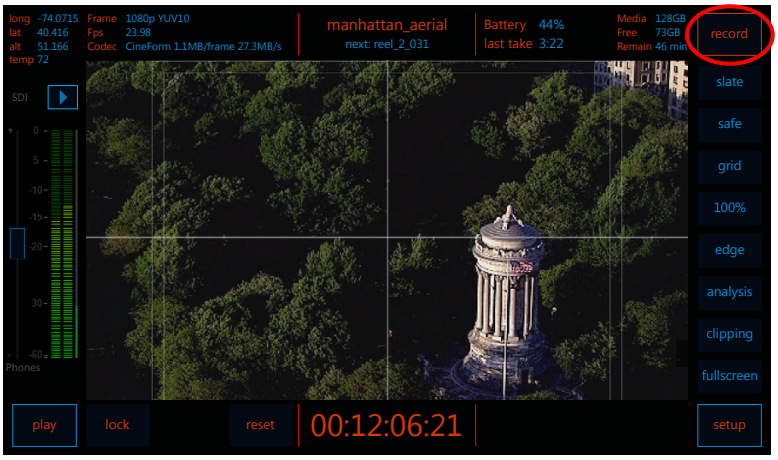
Record stop [stop]

To prevent accidentally stopping the recording, the button must be held down for about 1/2 second before stop will engage.

Wired remote record start/stop [start][stop]

When in 'wired remote' mode, [setup]:[prefs]:{rec/stop}the record button also acts as the stop button.

Once record is engaged, the text in the record button will change to [stop]



Main user interface, cont.

Slate display [slate] ***Not currently enabled.***

[Displays a "slate" image with project metadata which can be burned into the recorded file.

A "clapper" sound is recorded on the audio tracks when the slate is turned on.]

Main user interface, cont.

Safe Frame Display [safe]

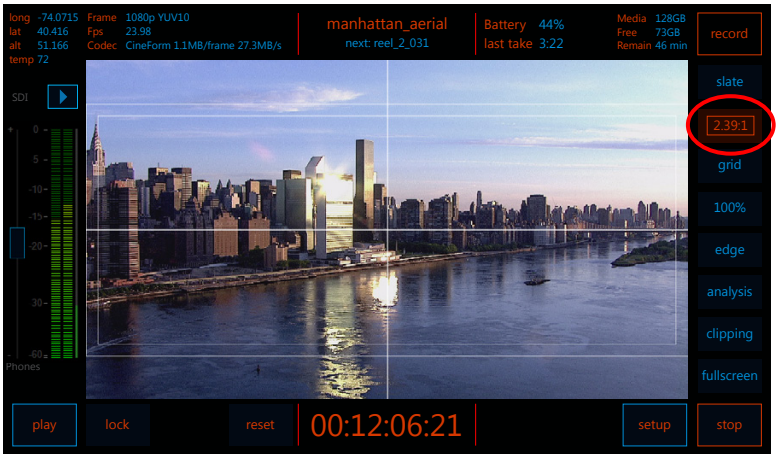
Enables selection of various standard safe frame overlays for common broadcast safe areas, cinema and broadcast aspect ratios, and image composition assistance.

To enable safe frame display, touch the safe button, then select the desired safe frame from the popup.

Safe frame on-off toggle [safe]

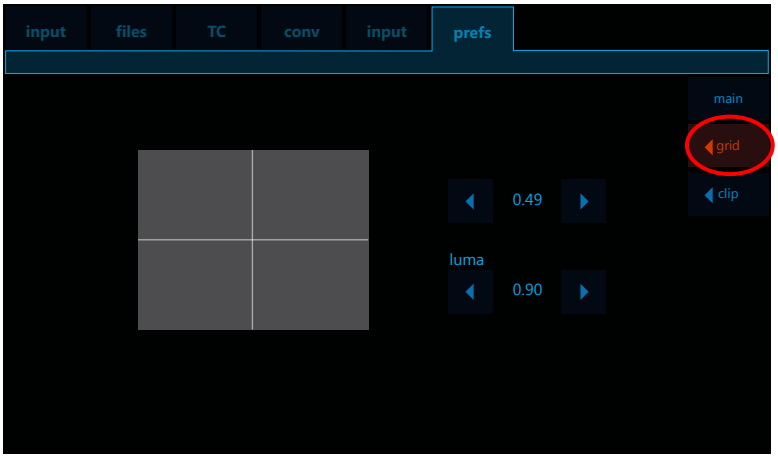
Once selected, you can toggle the safe frame on and off by a short touch of the safe button.

A long touch will bring up the safe frames pop-up again.



Safe frame preferences [setup]:[prefs]:[grid]

Preferences for brightness and opacity can be set in the user preferences setup menu. [setup:preferences:grid]



Main user interface, cont.

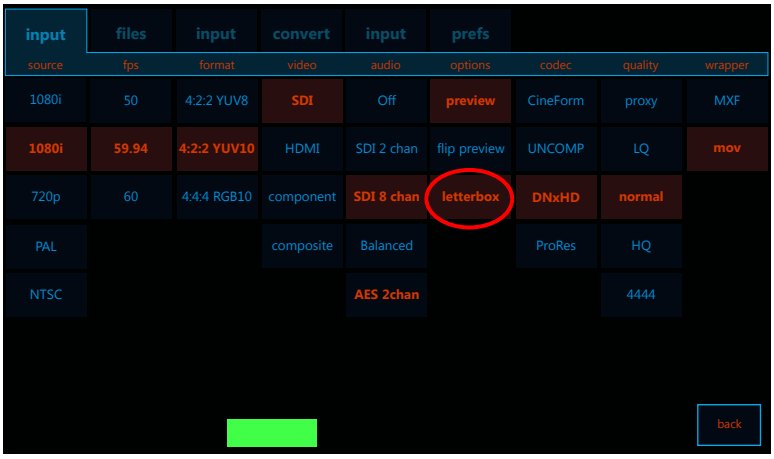
Letterbox Safe Frame Display [safe]+ [setup][input][letterbox]

First you must choose a safe area setting as shown on the previous page.

Letterbox preview [letterbox]

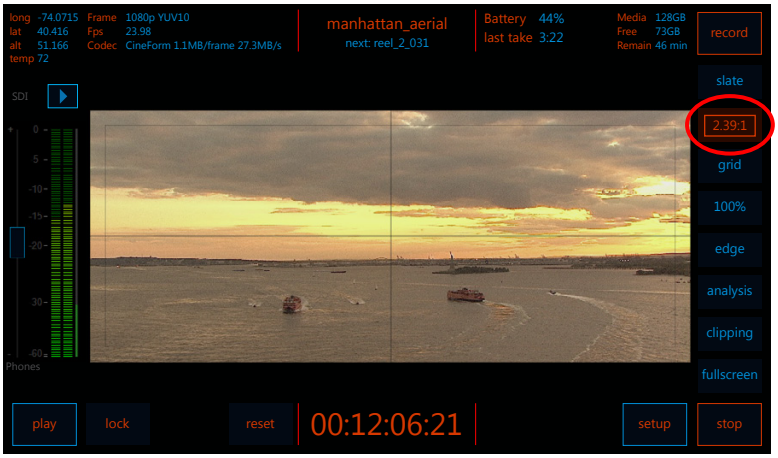
To enable letterboxing for preview, first you must choose a safe area setting as shown above.

Then in [setup][input] menu, letterbox must be active.



Letterbox preview [letterbox]

If both safe frame display and letterbox display are selected, you will see only the active safe area in the preview window.



Main user interface, cont.

Grid Display [grid]

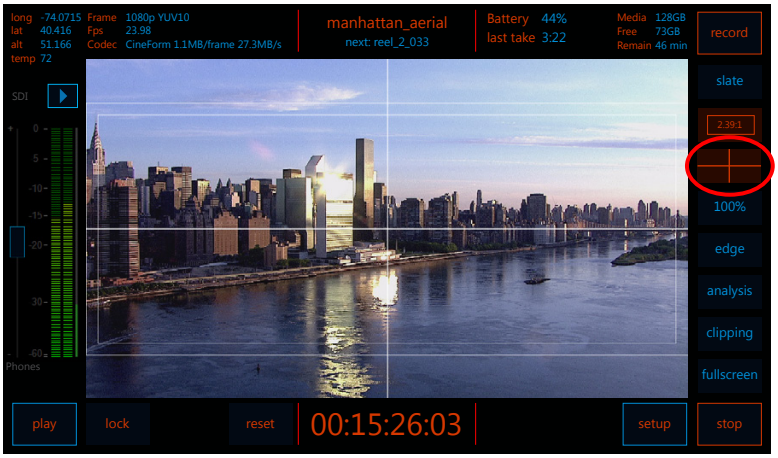
Enables selection of various standard grid overlays for image composition assistance.

To enable grid display, touch the grid button, then select the desired grid from the popup

Grid type [grid]

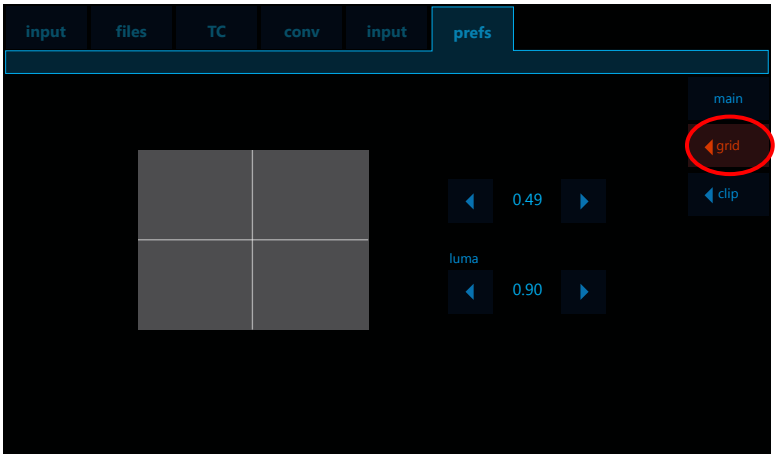
Once selected, you can toggle the grid display on and off by a short touch of the grid button.

A long touch will bring up the grid pop up again.



Grid opacity and brightness [setup]:[preferences]:[grid]

Parameters for brightness and opacity can be set in the user preferences setup menu. [setup:preferences:grid]



Main user interface, cont.

100% Display [100%]

Enables 100% (1:1 pixel) or actual size view of incoming signal.

To enable 1:1 or 100% display, touch the [100%] button.

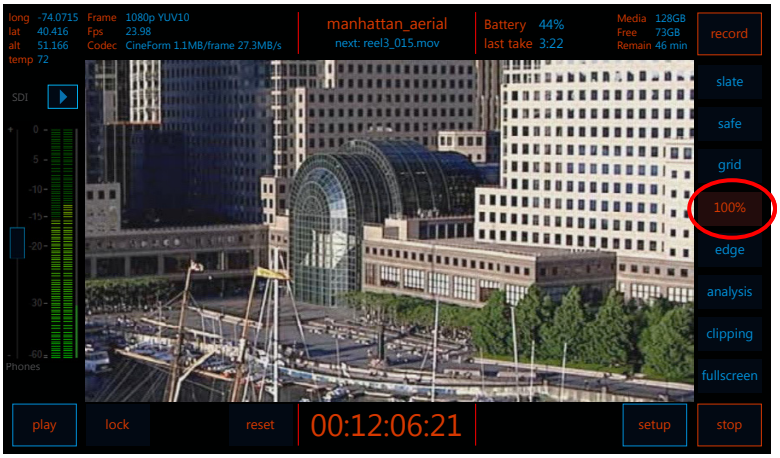
You can toggle the 1:1/100% display on and off by a short touch of the [100%] button.

100% (1:1) view [100%]

In SD, the image would be letterboxed and smaller than the preview window.

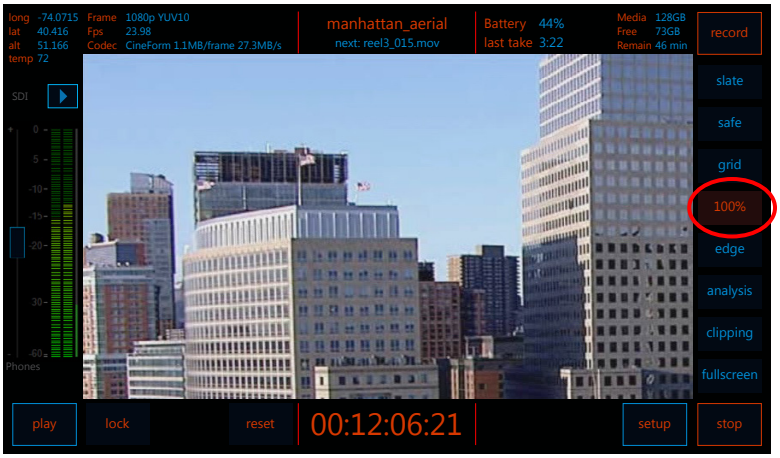
In HD, some of the image is outside the boundary of the preview window.

The image plane can be dragged around within the preview window to see the full extents.



100% (1:1) view "memory" [100%]

When the image has been dragged out of center, the next time 100% is enabled the preview window will display the same shifted area of the image plane. This is very useful if the focus reference in the shot is not in the center of the image plane.

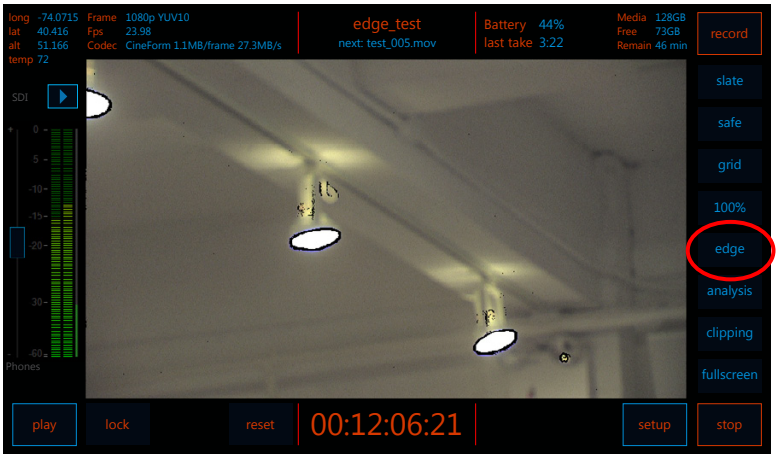


Main user interface, cont.

Edge detection display [edge]

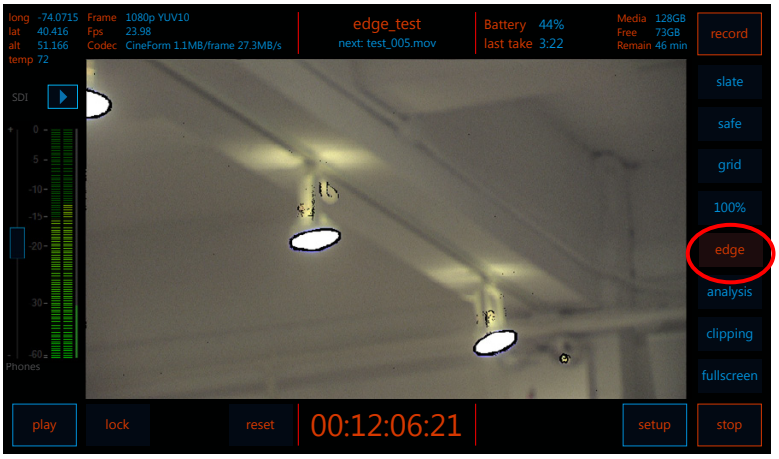
Enables edge detection to aid in accurate focus.

To enable edge detection tool display, touch the [edge] button.



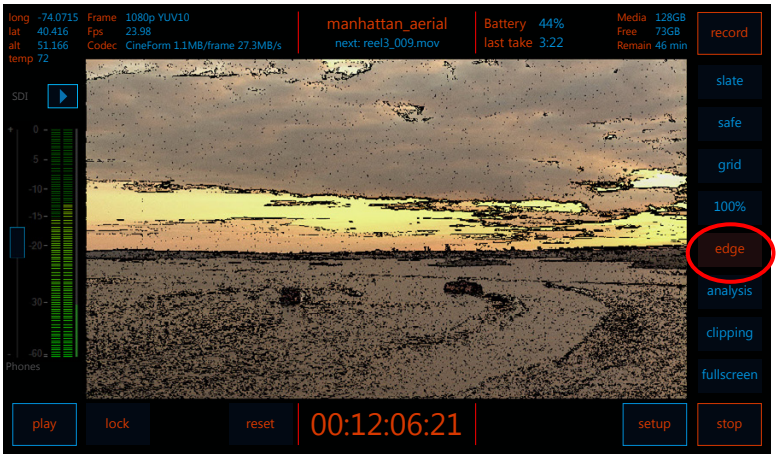
Edge detection display [edge]

The sharpness of the edges indicates areas that are most in focus.



Edge detection display [edge]

It is not advised that this tool be used in very noisy or telephoto scenes, or when shooting with a very high aperture value, as the algorithm used for edge detection works best when there is good depth of field.



Main user interface, cont.

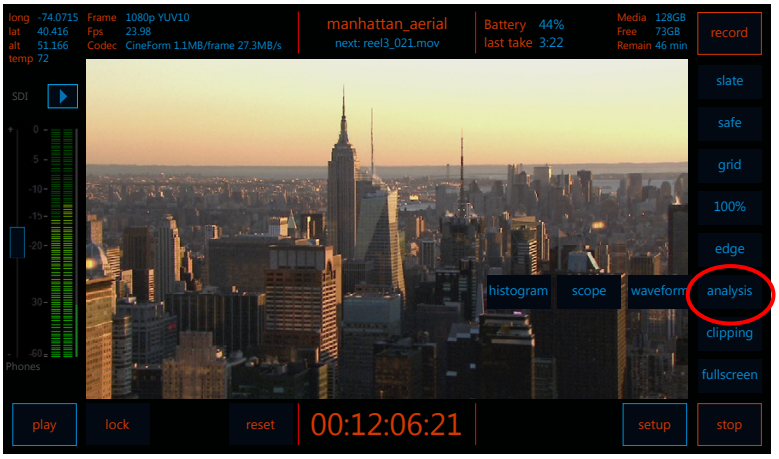
Image Analysis [analysis]

Enables image analysis tools menu: Waveform and Histogram (per channel or parade), and Vectorscope.

To enable anlaysis tool display, touch the analysis button, then select the desired analysis tool from the popup.

Once selected, you can toggle the analysis tools selection menu on and off by a short touch of the analysis button.

A long touch will bring up the analysis tools selection menu again.



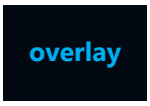


Image analysis, full window mode [overlay]

The analysis display tools may be displayed either as full preview screen images or as an inset overlay in the upper left corner.

Full preview window mode

(overlay inset shown off, default setting)

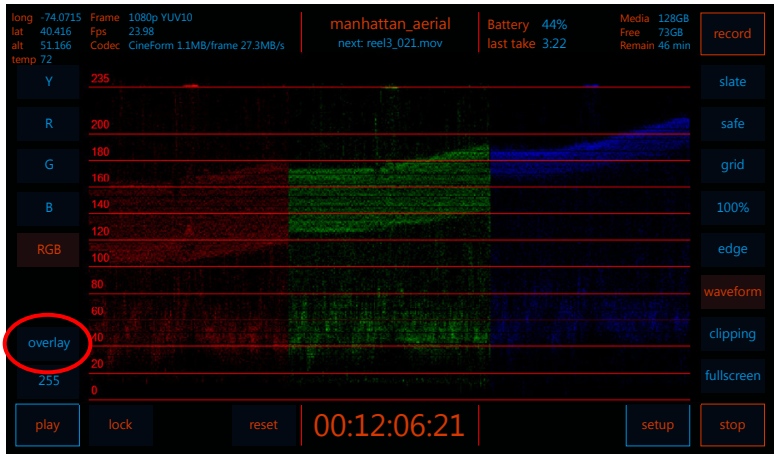
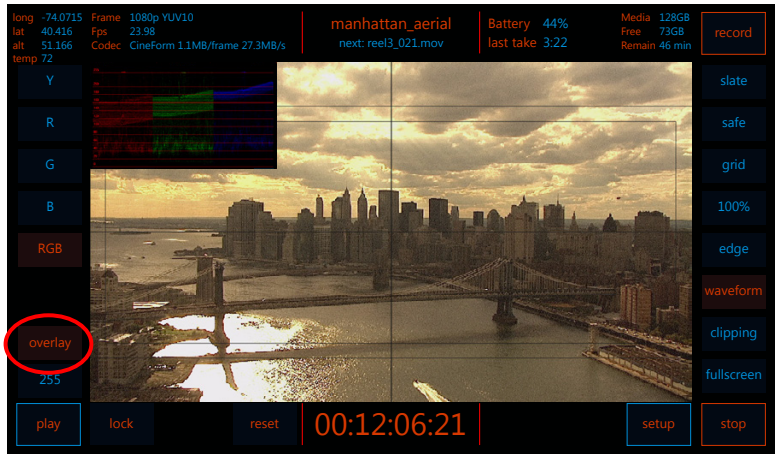


Image analysis, overlay inset mode [overlay]

Overlay inset mode shown on



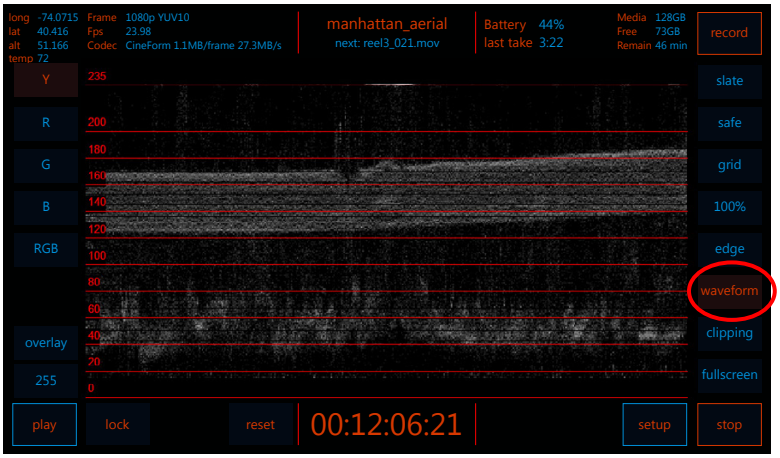
Main user interface, cont.

Waveform [waveform]

The waveform is a real-time display of image luminance values to aid in correct exposure settings.

Settings can be for individual channels, Red, Green, Blue, Composite (RGBY) and R, G, B simultaneous separate display, or "parade," of the individual channels.

Once selected, you can toggle the analysis tools selection menu on and off by a short touch of the [analysis] button.A long touch will bring up the analysis tools selection menu again.

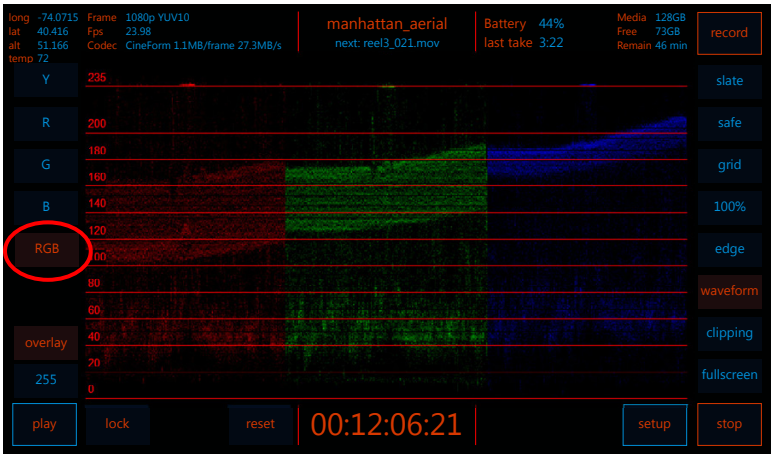


Overlay inset mode [overlay]

Composite (Y) waveform shown in inset overlay display.

Display channel selection [Y] [R] [G] [B] [RGB]

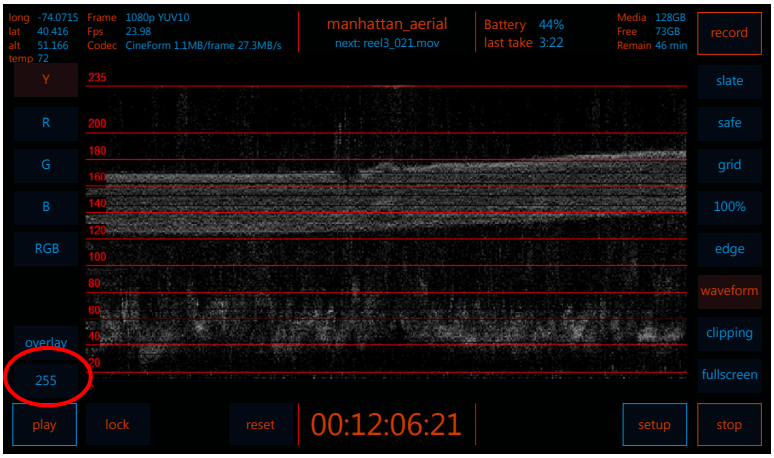
Display can be Y (composite) R [R], G [G], B [B] or RGB [RGB] simultaneous "parade" view



Main user interface, cont.

0-255 scale [255]

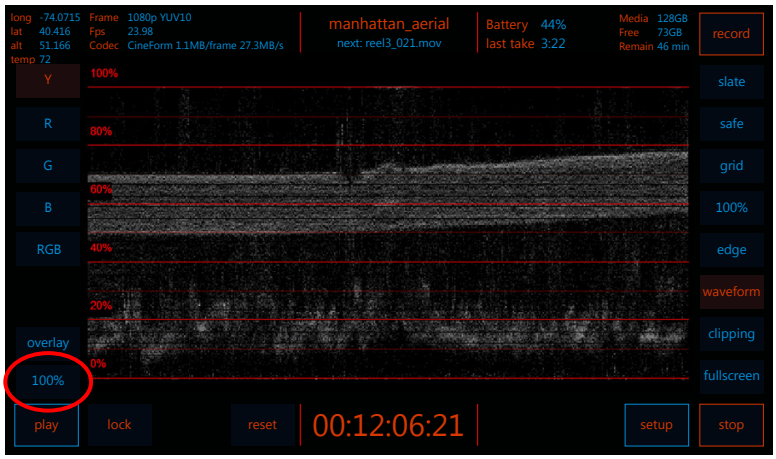
Heavy lines at 16 and 235 indicate the broadcast safe values



100% scale [100%]

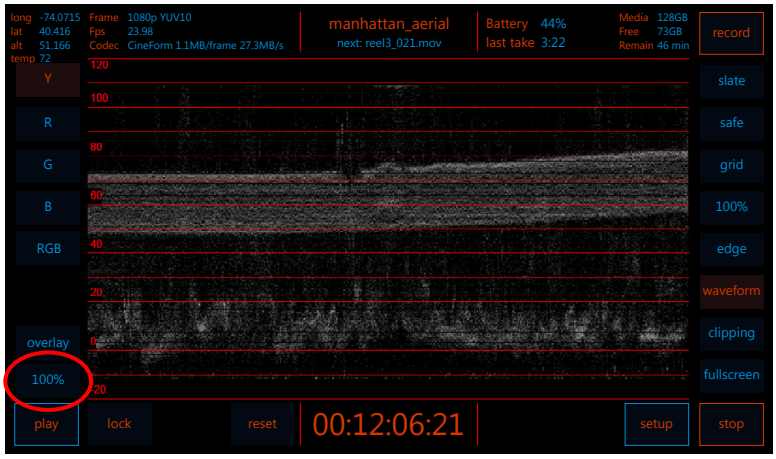
-6% to 109% broadcast scale

0%=16 on 0-255 scale
100%=235 on 0-255 scale



IRE scale [IRE]

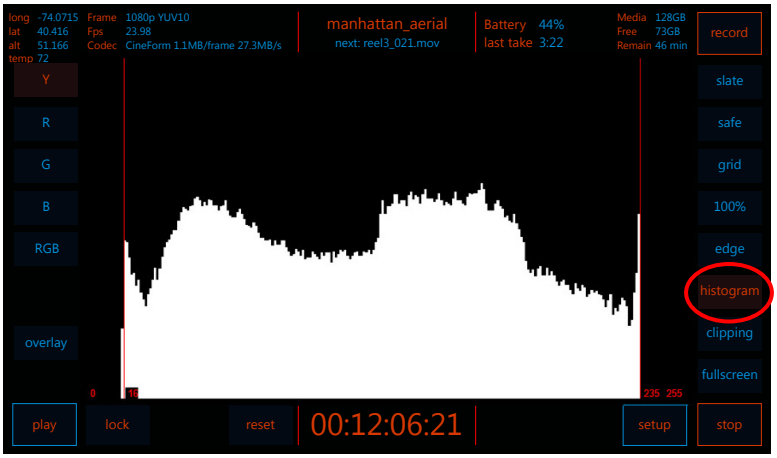
IRE (-20 to 120) scale



Main user interface, cont.

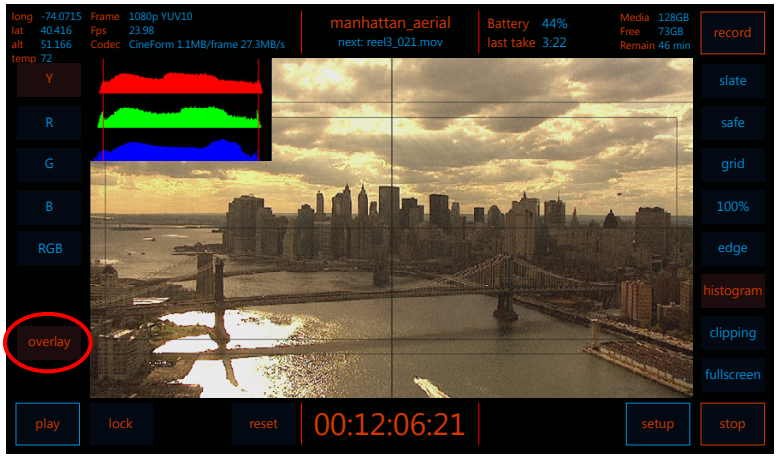
Historgram [histogram]

The Histogram is a real-time display of image luminance values to aid in correct exposure settings. Settings can be for individual channels, Red, Green, Blue, Composite (RGB) and R, G, B simultaneous separate display, or "parade," of the individual channels.



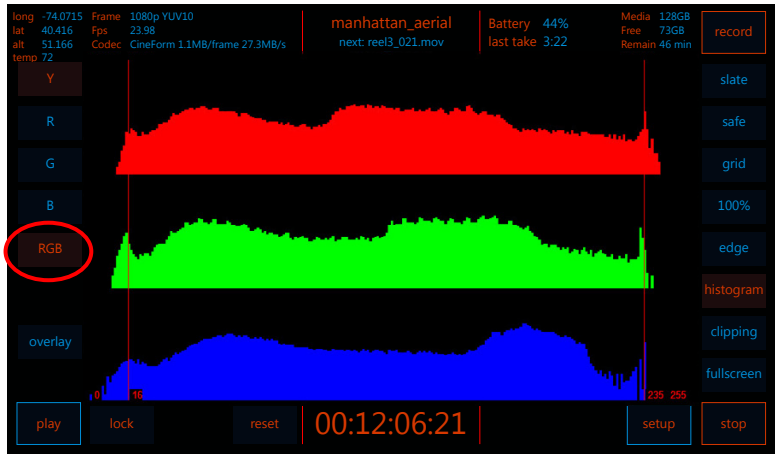
Historgram, overlay mode [overlay]

RGB Parade shown as inset overlay display.



Historgram, channel view [Y][R][G][B][RGB]

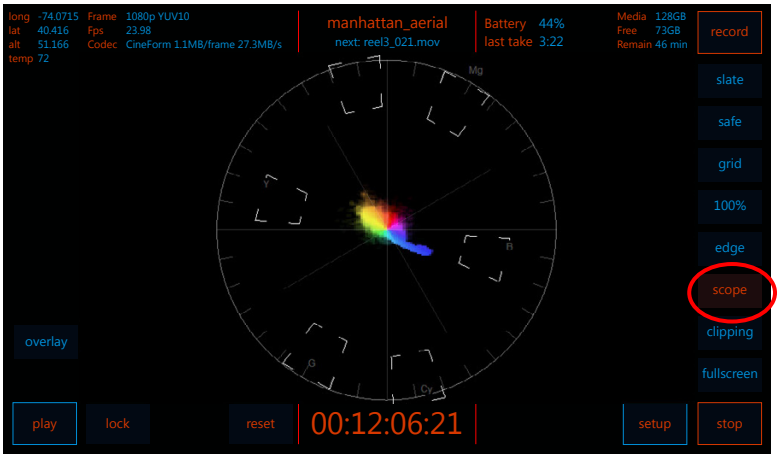
Display can be Y (composite) R [R], G [G], B [B] or RGB [RGB] simultaneous "parade" view



Main user interface, cont.

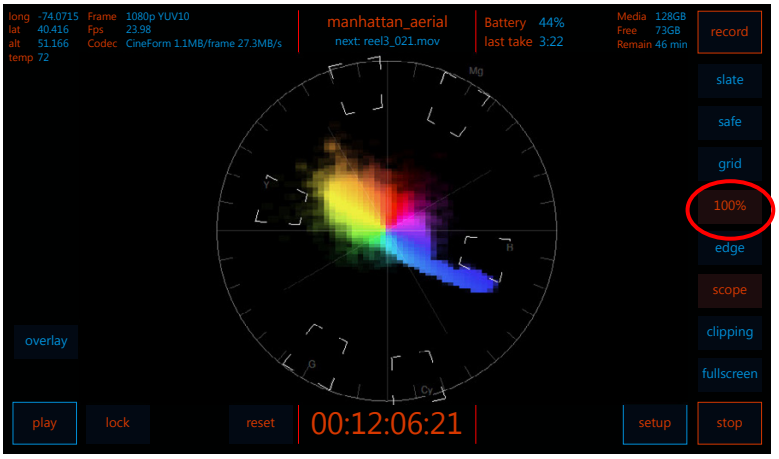
Vectorscope [scope]

The vectorscope is a real-time display of signal chrominance information to aid in setting correct color balance.



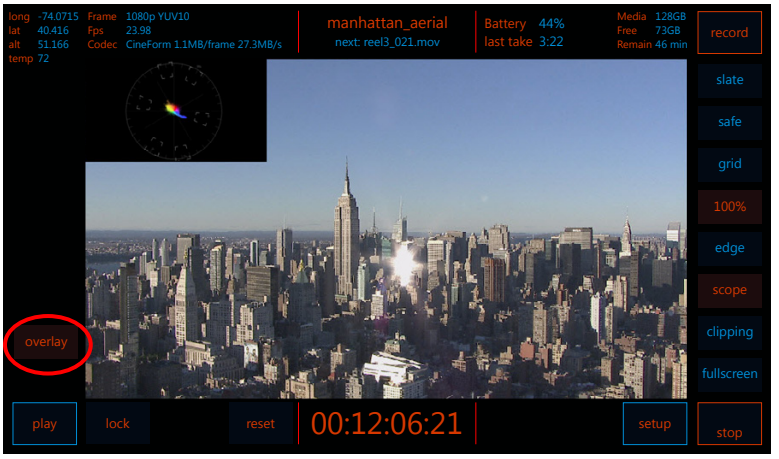
Vectorscope 100% view [scope]:[100%]

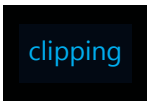
The 100% tool [100%] can be used to aid in viewing the 'scope image.



Vectorscope, overlay mode [overlay]

Vectorscope shown as inset overlay display.



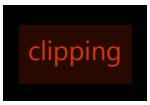


Highlight Clipping [clipping]

Enables highlight clipping tool display.

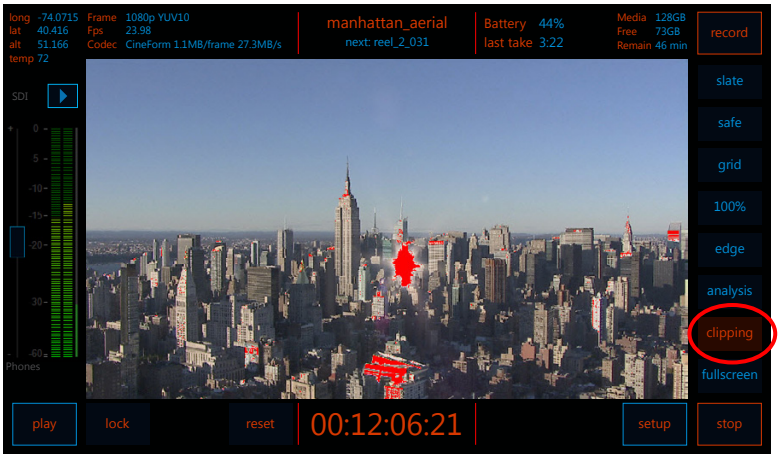
Highlight clipping shows brightness values above a certain threshhold of brightness as an aid to correct exposure.

This tool has a threshold that may be user determined: see [setup]:[preferences]:[clip]



Highlight clipping [clipping]

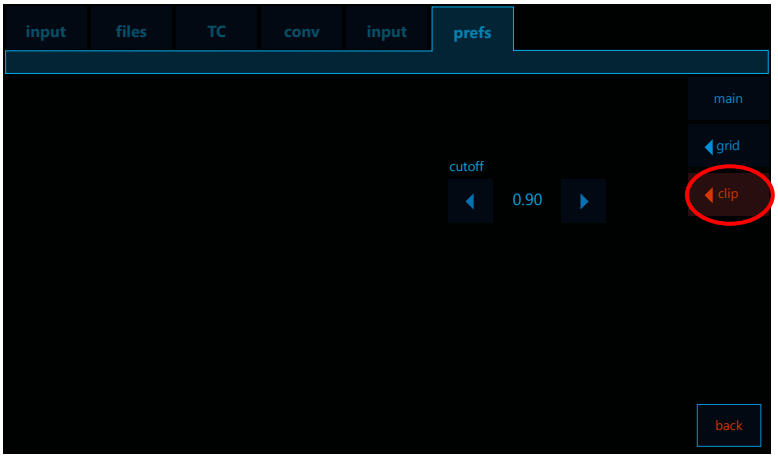
Highlight clipping shown in red.



Highlight clipping [setup]:[preferences]:[clip]

Parameters for brightness threshold, *color*, and *opacity* can be set in the user preferences setup page [clip]

[setup:preferences:clip]



Main user interface, cont.

fullscreen

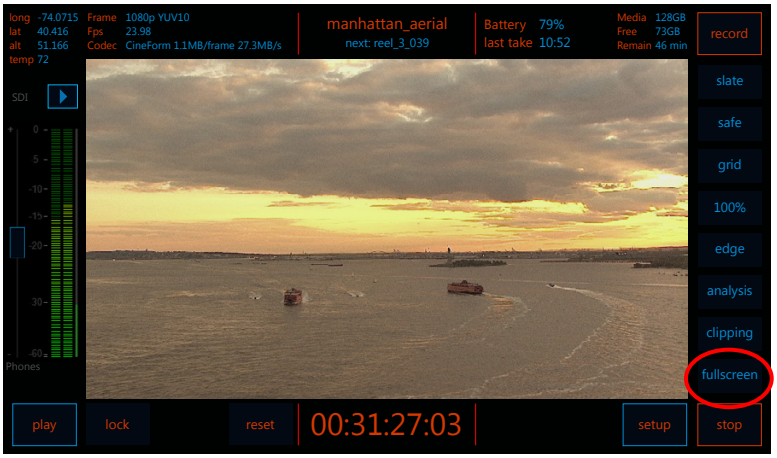
Full Screen display [fullscreen]

Enables full screen preview display and hides user interface overlays on the preview both in record and playback displays.

To invoke full screen display, touch the fullscreen button in the UI or the physical button adjacent to it.

Full screen preview display hides user interface overlays on the preview.

To exit full screen display, press the physical full-screen button or touch and hold the preview image for 2-3 seconds.



fullscreen

Full screen mode in main user interface [fullscreen]

Full screen mode with UI buttons hidden.

In fullscreen mode there is a small, dark gray bar indicating the physical button location for returning to the regular preview screen.

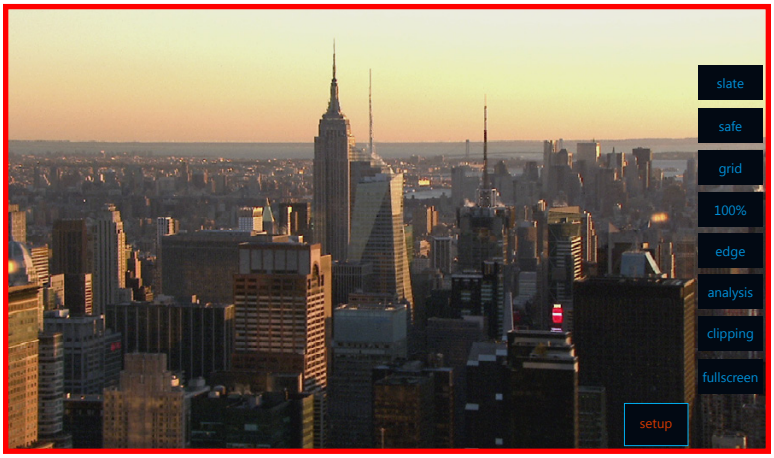
fullscreen

Full screen mode in main user interface [fullscreen]

Touching the display briefly will bring up the soft buttons.

This is the same in record mode as well as pause mode.

To exit full screen display, press the physical full-screen button or touch and hold the preview image for 2-3 seconds.



Main user interface, cont.

Full screen mode in playback interface. [fullscreen]

When in full screen mode in playback, a brief touch of the screen will bring up the transport controls momentarily.

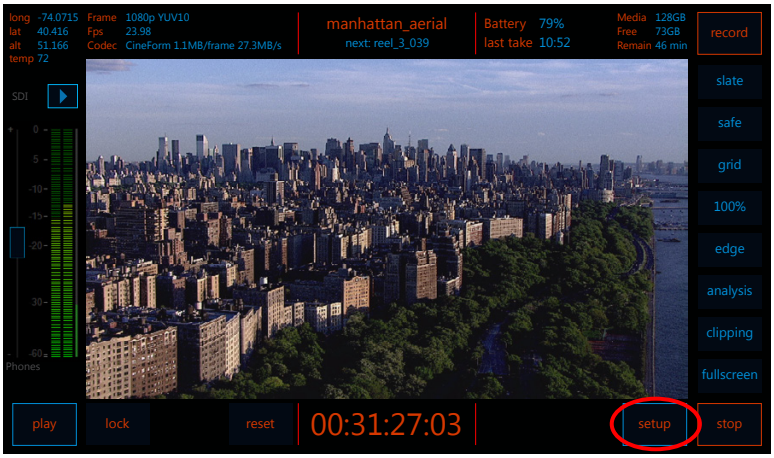
Full screen mode in playback interface. [fullscreen]

Full screen mode with safe frame and grid overlays.

Setup Menu Tabs [setup]

Invokes the setup menu tabs. [input][files][tc] [output][update][prefs]

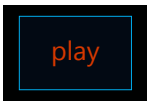
Preferences [prefs] is the default tab when setup is invoked.



Main user interface, cont.

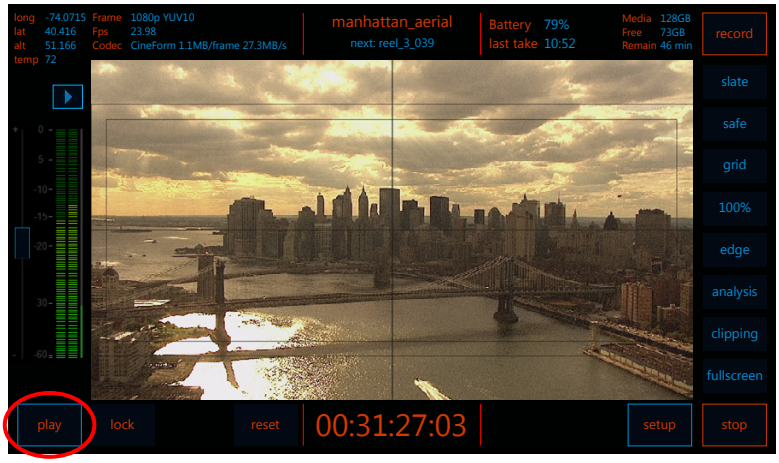
Setup Menu Tabs [setup]

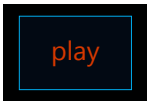
See: Preferences and Settings for full description of options in the prefs tab.



Playback user interface [play]

Invokes the playback user interface.

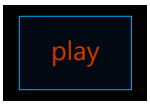




Playback user interface [play]

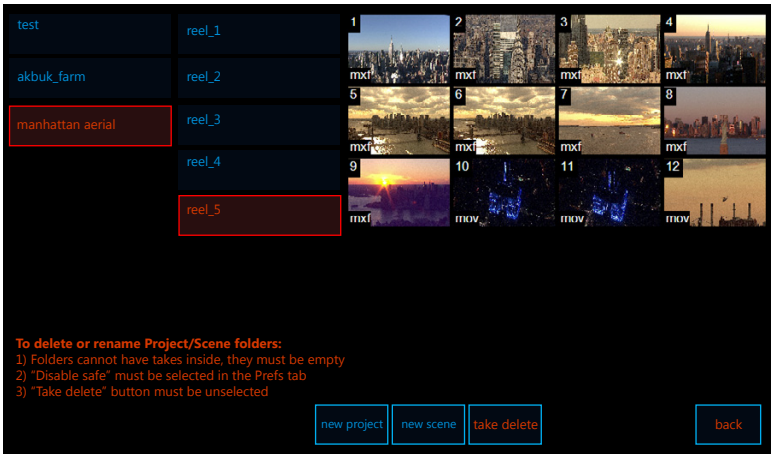
The last clip recorded queued by default when the play button is invoked.

Main user interface, cont.



Playback file manager [play]:[open]

If there is no clip in the current project folder, the clip manager is opened by default. If there are other projects or scenes with clips, they can be opened from here.

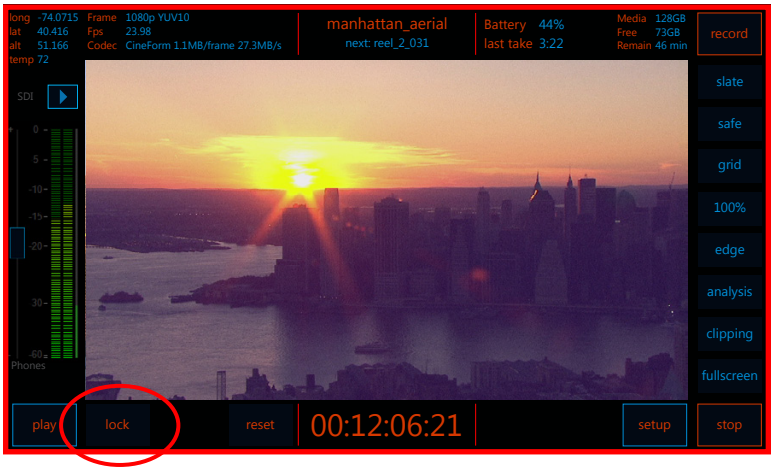


Touch screen lock [lock]

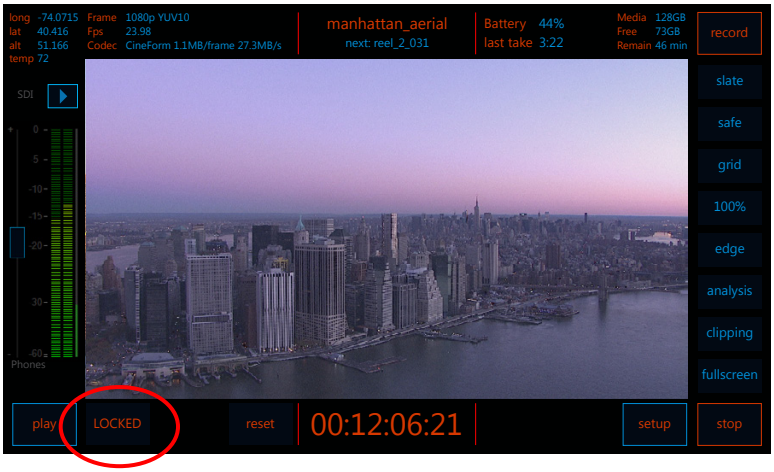
Locks the touchscreen user interface.

When the touchscreen lock is invoked, record, stop TC reset and access to the setup menus are disabled.

This is designed to prevent unintentional starting or stopping of record etc.



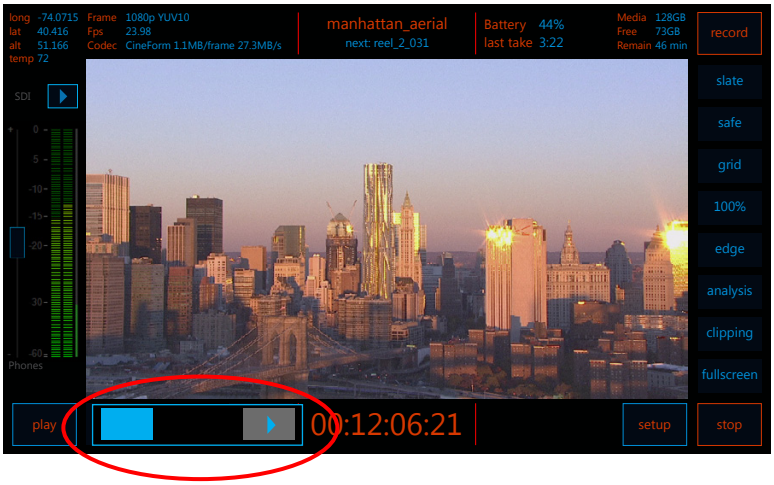
When the touchscreen is locked, the text on the lock button will change to "LOCKED".



Main user interface, cont.

To unlock, touch the lock button and slide the popup slider to the right.

It is necessary to stay within the borders of the slider or the unlock will not register.



Time Code Reset [TC reset]

When in internally generated time code mode, resets the time code to zero: 00:00:00:00
If an offset is active, it sets timecode to zero plus the offset. eg 01:00:00:00

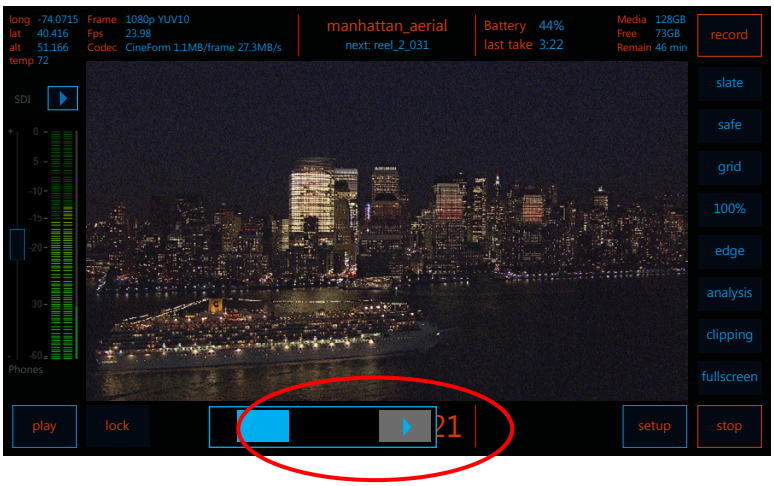
The timecode reset is only relevant when in internally generated timecode, record run mode.

If in hardware or SDI time code mode, or in internally generated free run or per take modes, the TC reset button will not be visible.

Time Code Reset Slider [TC reset]

To reset, touch the [TC reset] button and slide the popup slider to the right.

It is necessary to keep the stylus within the borders of the slider or the unlock will not register.



Main user interface, cont.

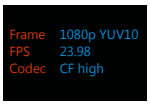
Settings and Status displays

Fan mode [fan]
displays current fan mode [auto][fixed]

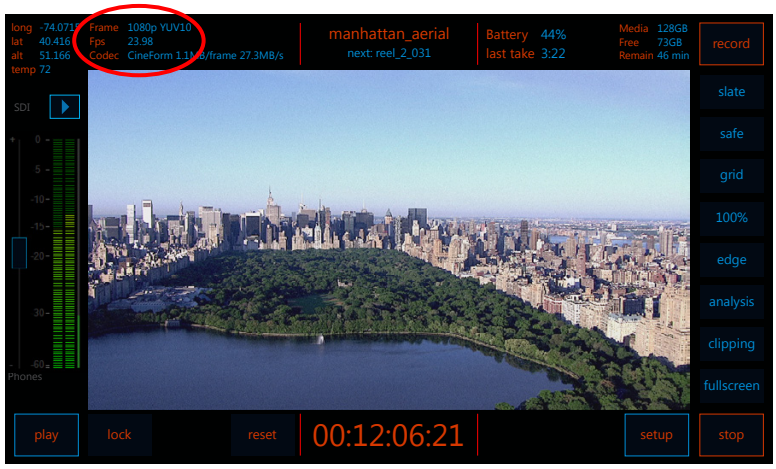
fan speed in RPM [rpm]
displays current fan speed in RPM

Current system temp [temp]
Displays the current system temperature in degrees Celsius (°C)

Touching the system status display will open the relevant preferences tab, [prefs]



Input status displays:



Frame size, frame type and colorspace

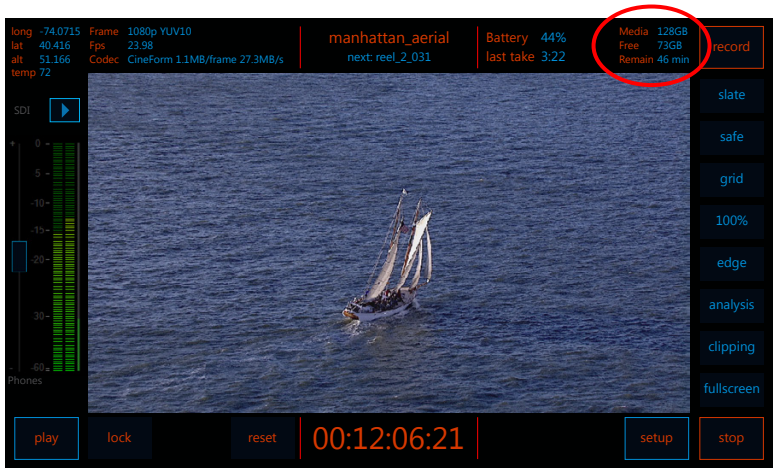
Displays the current frame size: 2K, 1080, 720, NTSC or PAL; frame type:progressive or interlaced. [frame]

Frames per second [fps]
Displays the current recording frame rate

Current codec [Codec]
Displays the current codec used for encoding the video stream.

Touching the input status display will open the relevant preferences tab, [input]

Media status displays:



Total media Capacity [Media]

Remaining media capacity at the current data rate [Free]

Remaining record time at the current data rate [Remain]
This is only accurate while shown during record.

Main user interface, cont.

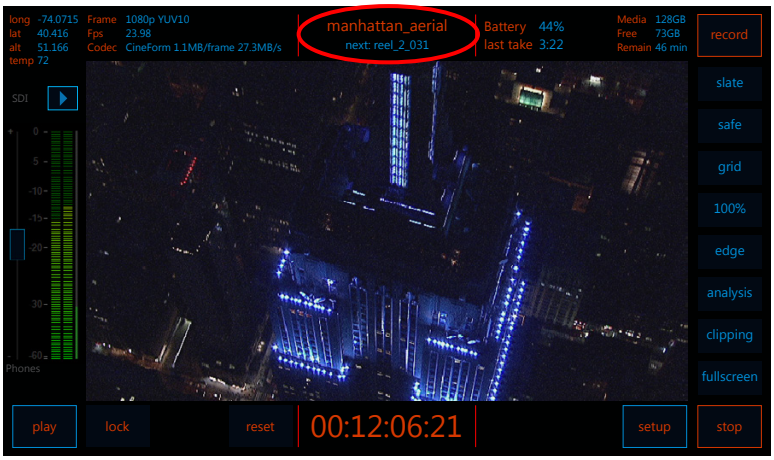
Filename display.

While recording is paused, displays project name and scene name with the next record take increment.

ie. PROJECT and scene_increment.mov

During record, displays project name and current take increment.

Touching the file names display will open the relevant preferences tab, [files]



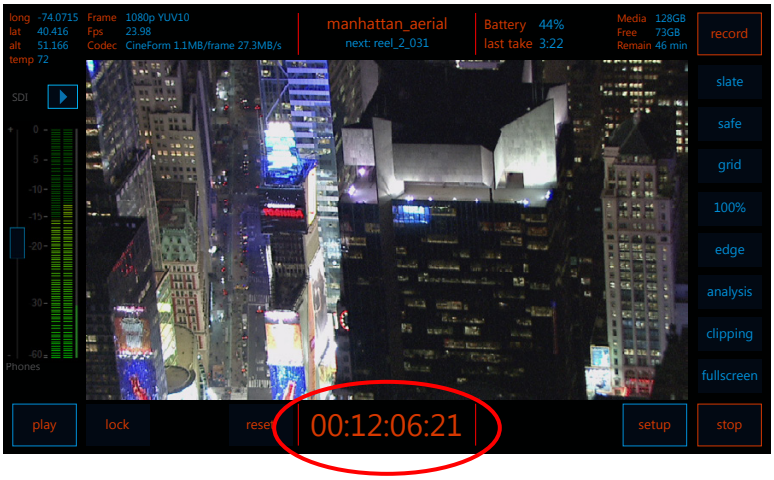
Time Code Status display

While not recording, displays the current time code in freerun modes, and the end time code from the last take in record run modes.

While recording, displays the current time code value in all modes.

The display may be in SMPTE time code UTC time, or local time. When recording to CineForm, both SMPTE and UTC are written as metadata to the file. In other codecs, currently only SMPTE timecode is written.

Touching the time code display will open the relevant preferences tab, [tc]



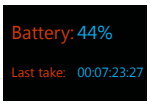
Audio input status display.

Shows current input setting for audio source:

OFF (no levels meter display)
Two channel SDI [SDI2]
Eight channel SDI [SDI8]
Two channel balanced line level [Bal]
Two channel AES [AES2]
Four channel AES [AES4]

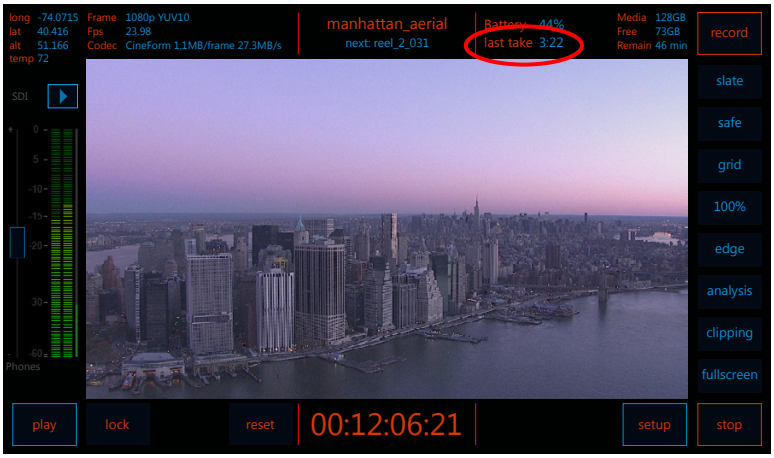
In the playback menu, this shows the output source as the currently queued file. [file]

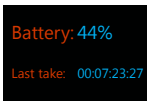
Main user interface, cont.



Last take duration display [last]

Displays the duration of the last take in minutes and seconds.





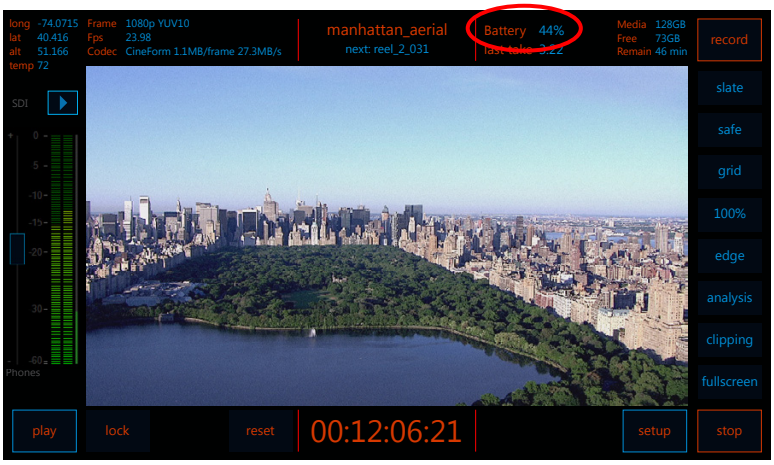
Battery meter display

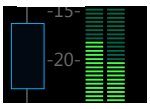
Displays the battery charge level in %.

If battery meter is on, and no battery is connected, the display will show 0%

This setting is user-selectable for either Anton Bauer or IDX standards.
[setup][prefs][battery meter]

Touching the battery meter display will open the relevant preferences tab, [prefs]





Audio levels display & headphone volume slider

Displays the current stereo pair selected for monitoring.

The slider controls headphone monitoring volume. The base setting for this is controlled in the windows sound control panel.

Touch the arrow to invoke the audio controls pop-up. [>]

Main user interface, cont.

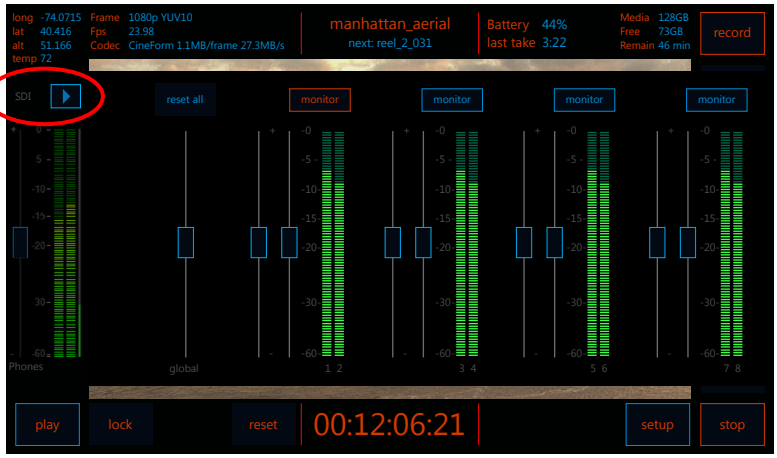
Audio options menu [>]

Touch the arrow to invoke the audio controls pop-up.

Controls record audio levels both globally and for individual channels as well as headphone monitoring volume.

Up to 8 active channels will be shown, depending on audio input settings.

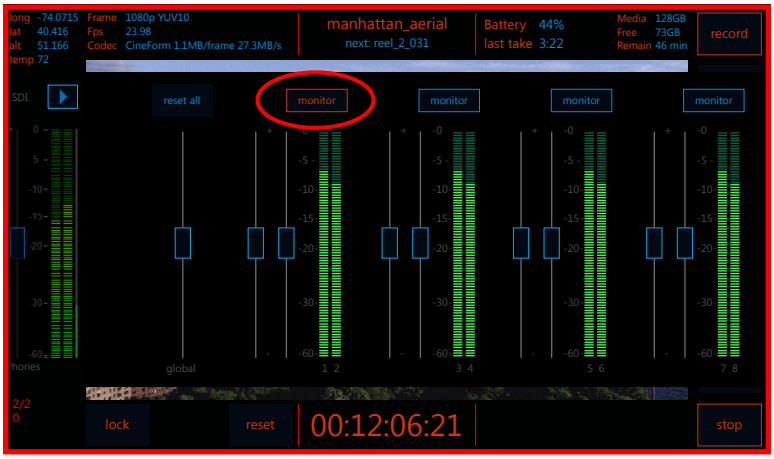
Channels that are not active will be “grayed out”, eg darker and cannot be selected.

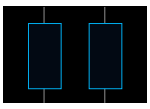


Monitoring selection

One stereo pair at a time may be monitored.

Monitoring choice may be changed at any time, including during record.



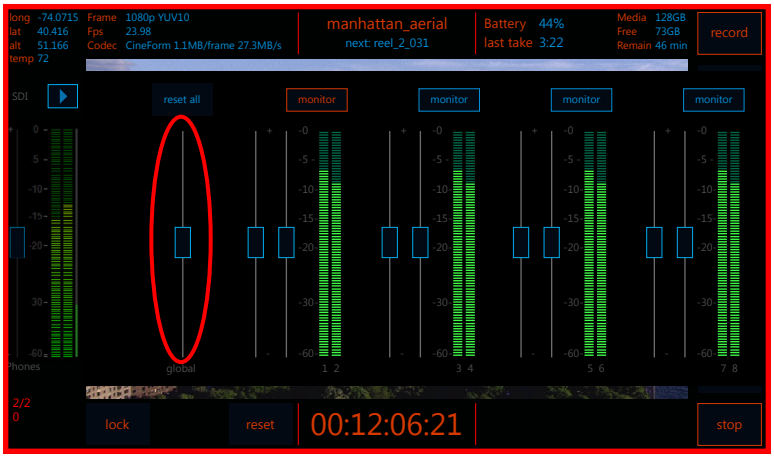


Volume sliders

The volume sliders control volume much as expected.

The base volume level for the headphone monitoring is set in the windows control panel:
“sounds and audio devices:playback:volume”

The sliders can be globally reset by touching the [reset] button.



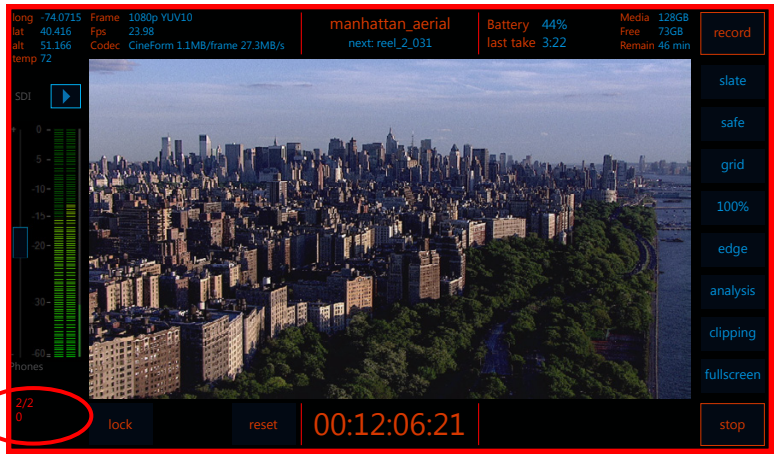
Main user interface, cont.

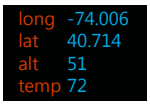
Performance metrics display

Indicates the status of encoding and disk write buffers.

The upper number is the encoding buffer. The left number is the current usage, and the right number is the maximum usage in the current session. If the left number exceeds 20, encoding will stop.

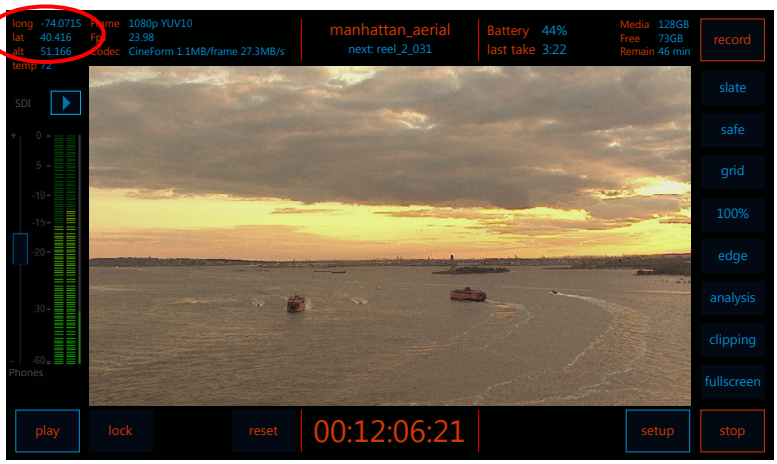
The bottom number is the current number of disk write buffers. If that number exceeds 50, encoding will stop. For some SSDs, this is an indicator that they need to be trimmed. see [trim]

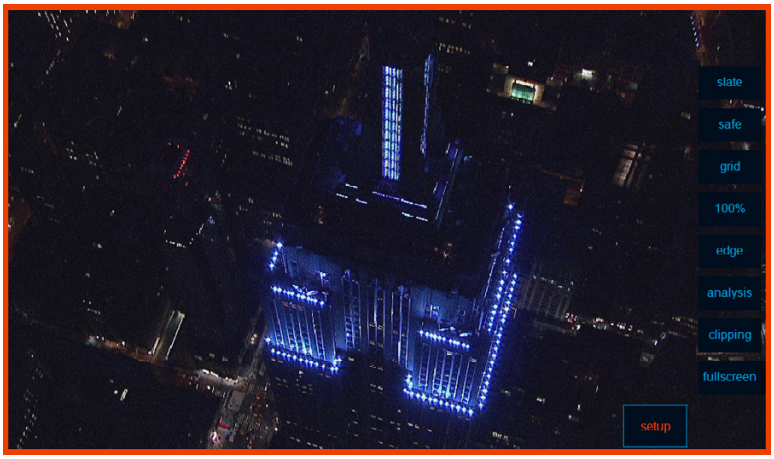




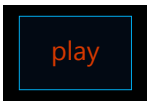
GPS coordinates display

When a GPS device is plugged into the Cinedeck (currently only Garmin USB GPS devices are supported) and [GPS] is active in [setup]:[prefs], the current GPS coordinates will be displayed.





Playback user interface

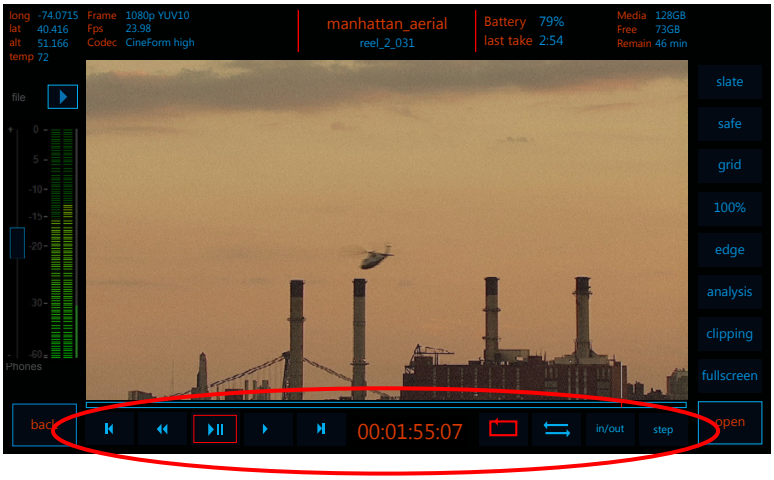


Playback interface [play]

The second main user interface is the playback screen, which is very similar to the main record interface, with the addition of playback specific tools, mainly the transport controls, and includes displays with relevant information for the currently queued clip, includuing output settings, project, scene and take names, timecode display, and access to all commonly used tools.

The information displays are static and do not lead to menus, since the information comes from the recorded file.

Transport controls



Transport controls include:

Go to beginning

Fast reverse

Play

Fast forward

Go to end

Loop

Back-and-forth

Set in/out points

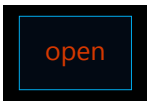
Step frame by frame

Fullscreen, playback mode [fullscreen]

When in playback, full screen mode, touching the screen will briefly bring up the transport and overlay controls.

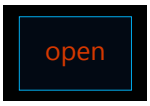
These controls will disappear after 2-3 seconds after the screen is last touched.

Playback user interface, cont.



Playback file manager open [open]

The open button invokes the playback file manager.



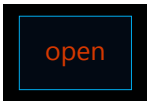
Playback file manager open [open]

The playback file manager allows selection of the current folder for playback as well as take deletion.

If there are no takes in the current project folder, the project manager is opened by default when [play] is selected from the main interface.

If there are other projects or scenes with takes, they can be opened from here.

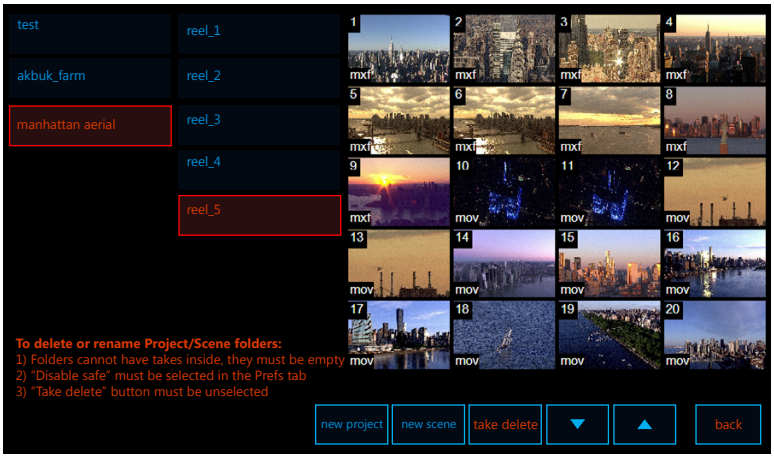
If the current project or scene folder contains no takes, the folders may be renamed here as in the main file manager.



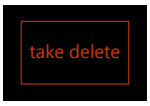
Playback open menu thumbnails display and navigation.

Each take is labeled with the take number and file type.

If there are more than 20 takes in the folder, navigation arrows will appear.



Playback user interface, cont.

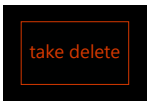


Take delete [take delete]

The take delete button [take delete] enables the deletion of takes.

When the button is active, a red "x" appears on each take. To delete a take, press the x and then slide the slider to either the left or right depending on where in the window the take is.

BEWARE! THIS CANNOT BE UNDONE!
Think at least twice before deleting takes.
Copy to other storage first.



Take delete [take delete]

Deleted takes are shown by an empty space until the take delete button is deselected.

Once the take delete button is deselected, the takes will again form an uninterrupted grid.

File recovery [recover]

If the Cinedeck loses power while recording, upon restarting the application, the file affected will show a "recover" button in place of the thumbnail. ***QUICKTIME FILES ONLY**

To recover the file, simply press "recover" and the file will be rewritten and closed properly.

As this process creates a new file, it may be necessary to create space on the media.

If space is insufficient, copy all other files except the affected file and its associated .journal file to other media, then put the media with the bad file back in the Cinedeck.

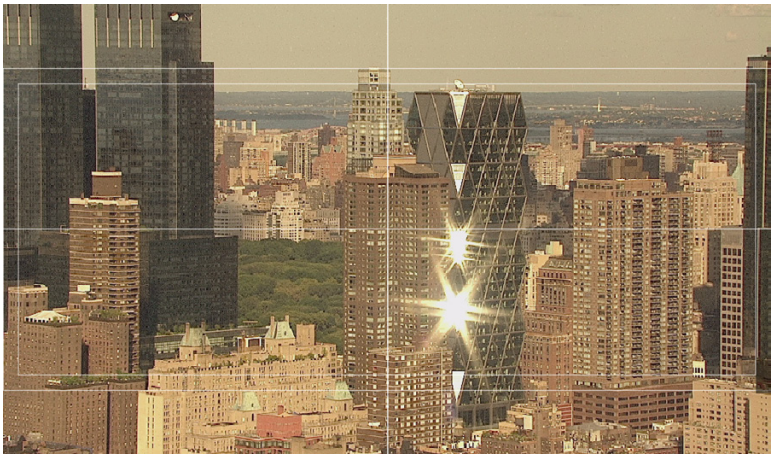
Playback user interface, cont.

File recovery, continued [recover]

While the recovery is in process, the progress bar will fill the screen.

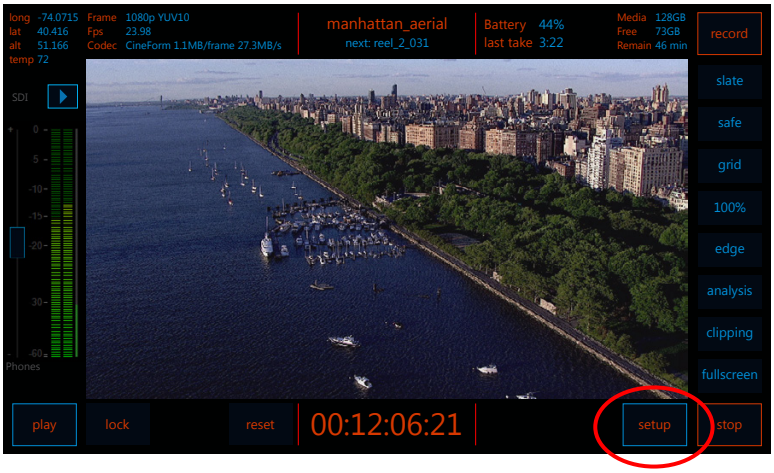
File recovery [recover]

Once the recovery is finished, the thumbnail will be displayed and the file can be opened normally in playback, or copied to other media for editing.



Setup Menu Tabs [setup]

Invokes the setup menu tabs. [input][files][tc][convert][update][prefs]



The prefs tab includes general preferences settings.

The general preferences tab is the default when setup is invoked.

Settings changes sometimes require application restart.

Some setting changes require an application restart. This is preceeded by a warning, "press ok to apply setting"

Settings changes that require restart in the general preferences are:

[P not PsF]
[gps]
[reset prefs]
[restart app]

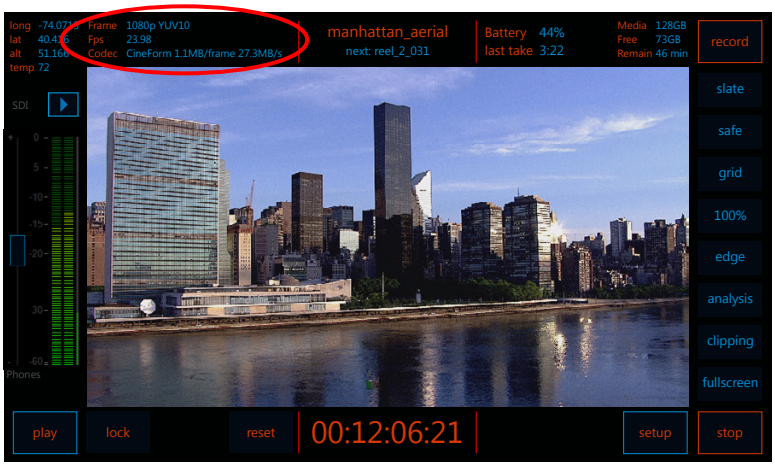
Input preferences tab [setup]:[input]

Input preferences tab [setup]:[input]

The user preferences tabs are where preferences and settings for input, output, time code and general settings are selected.

The setup button will take the user to the last selected preferences tab.

If accessing the preferences tabs using the info display shortcuts, the selected tab will be that relevant to the info display.



Signal input settings [setup]:[input] or {input status display}

The input tab is where frame size, frame rate, color space, video source, audio source as well as codec, quality setting and file type are selected.

There is a green indicator light that shows when signal has been successfully synced to the input source.

There are also options related to the signal input preview.

Valid input selections

As selections are made for resolution, frame rate, color space, input, audio, codec and quality settings, and wrapper type, they influence the availability of other settings.

When DNx is selected, both MXF and MOV are valid selections, whereas when ProRes, CineForm or Uncompressed are selected, only the MOV wrapper type is available.

Input preferences tab, cont. [setup]:[input]

input

Application restart on settings change

Some settings changes require a restart of the application.

In the input settings page, application restart is required for:

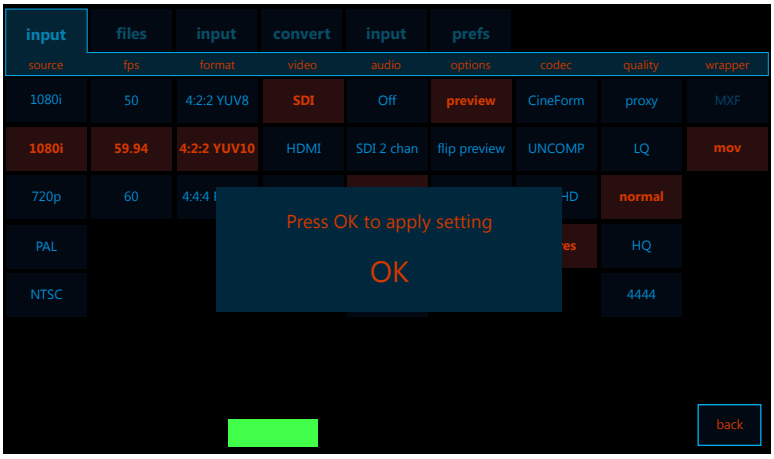
1) switching between compressed and uncompressed modes.

2) changes to the audio input

When time code is set to "Ambient", all settings require restart to re-sync the time code.

input

Application restart on settings change



If an application restart is necessary to initialize the new setting, a dialog will appear to inform the user.

input source

Input resolution

For HD settings, ensure your camera is set to 16x9 output.

Valid input resolutions are:
1080i (1920x1080 interlaced)
1080p (1920x1080 progressive)
1080psf (1920x1080 progressive segmented)
720p (1280x720, progressive)
PAL (720x576 interlaced)
NTSC (720x 480 interlaced)

Input preferences tab, cont. [setup]:[input]

input fps

Input frame rate

Not all frame rates are available in all codecs. If a codec or quality setting is not available based on the input frame rate, there will be no setting available in the codec or quality-columns.

Valid input frame rates are:

23.98p	50i
25p	5994i
29.97p	60i
50p	
5994p	
60p	

Variable rates are not supported at this time.

input format

Input pixel format

Pixel format selections are:

YCbCr or YUV, 8bit, 4:2:2
YCbCr or YUV, 10bit, 4:2:2
RGB 10 bit, 4:4:4

input video

Input video source

Video source selections are:

3G HD SDI
Dual Link HD SDI
SD SDI
HDMI
Component
Composite (Y input on breakout)

Input preferences tab [setup]:[input]

input audio

Input audio source

Audio source selections are:

Off
SDI embedded audio, 2 channels
SDI embedded audio, 4 channels
AES digital audio, 2 channels
AES digital audio, 4 channels
Balanced line level
(XLR input 1 & 2 on breakout cable)

Switching audio source selection requires an application restart.

input options

Input preview options

Input preview options are:

Preview on/off
Turns off live preview window

Flip preview

For use when the Cinedeck is mounted up-side down for some reason.

Letterbox
Provides black letterbox mask for composi-tion with non-16x9 aspect ratios.

input codec quality wrapper

Input codec, quality, and file format (wrapper) options

Compressed codec selections are:

CineForm, all quality settings, .MOV
DNxHD: all bit rates, .MXF and .MOV
ProRes, all quality settings, (.MOV)

Uncompressed codec selections are:
CineForm Uncompressed RGB10 (.MOV)
Uncompressed RGB10 (MOV)

Switching between uncompressed and compressed formats requires an application restart

Folder manager tab [setup]:[files]

files

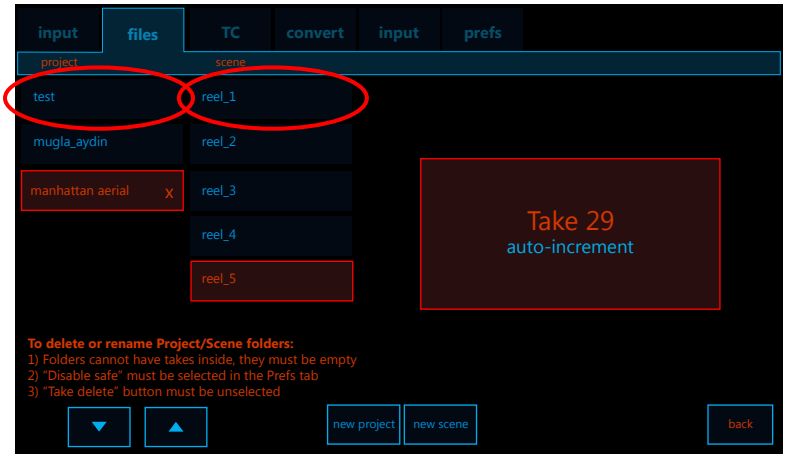
Folder manager tab [setup]:[files]

The file manager allows creation of a folder and subfolder file structure for the organization of projects.

Take names are derived from the folder names, plus an auto-increment. The next take is always shown in the take increment display.

Typical naming would be:

folder1_folder2_takeIncrement.mov
eg: Camera1_scene1_001.mov



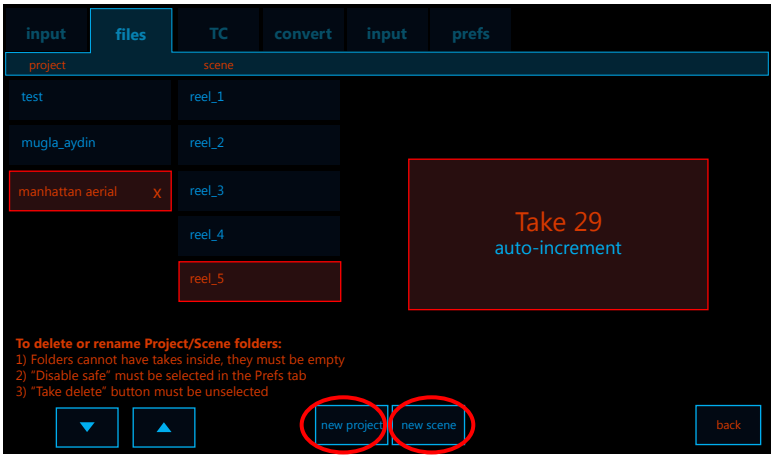
files

Folder creation [new project][new scene]

The [new project] button creates a new top level folder, and a single scene folder is created within that folder at the same time.

The [new scene] button creates a new subfolder within the currently selected top level folder.

Default naming for newly created project and scene folders is an auto-incremented number.



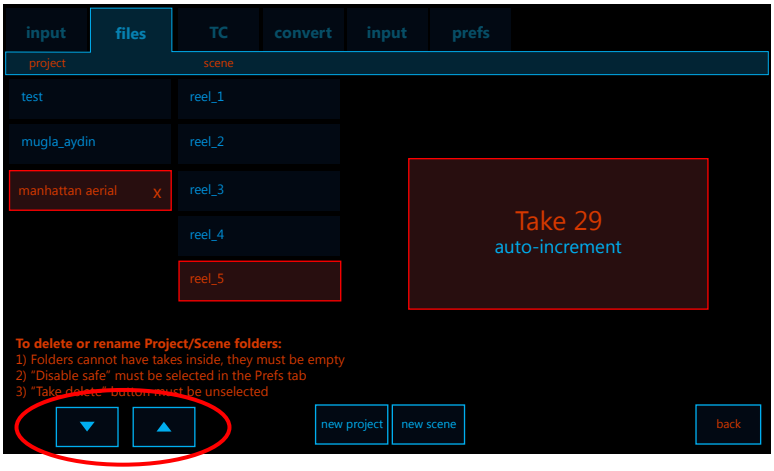
files

Folder creation, cont.

When ceating scenes within a project folder, the scene folder name will auto-increment if no name is given.

The name may be changed as long as there are no takes in the folder.

If there are too many folders to show on one page, navigation arrows will appear to allow scrolling through the full list.



Folder manager tab, cont. [setup]:[files]

files

Renaming folders

Folder renaming is invoked by touching the folder name.

[Safe disable] must be on in the main preferences menu [setup][prefs] for folder renaming to be enabled, and the folders cannot have takes (files) in them.

The keyboard allows only the valid characters allowed in Windows file names.

files

Folder selection

Selecting a different top level folder reveals the subfolders within, and the "next take increment" display will change to reflect the next take increment for that folder.

files

Deleting folders

In order to delete folders, [Safe disable] must be on in the main preferences menu [setup][prefs] and the folders cannot have takes (files) in them.

To delete, touch the red "x" and slide the slider to the arrow. The "x" will not be visible if safe mode is on.

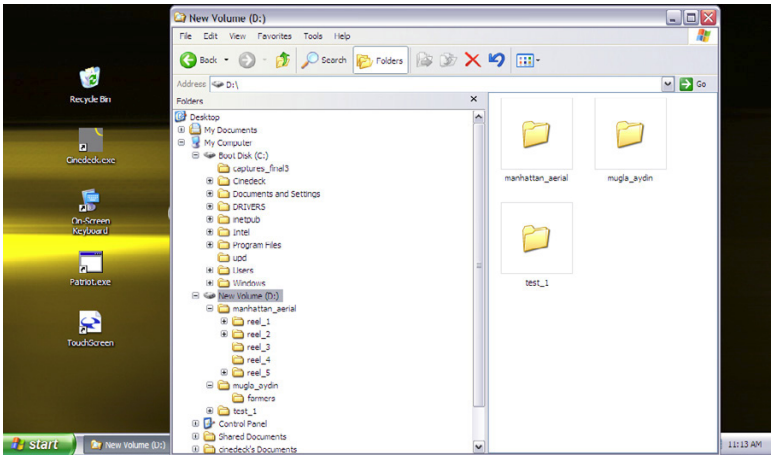
An empty folder is indicated by "take 1" displayed as the next take.

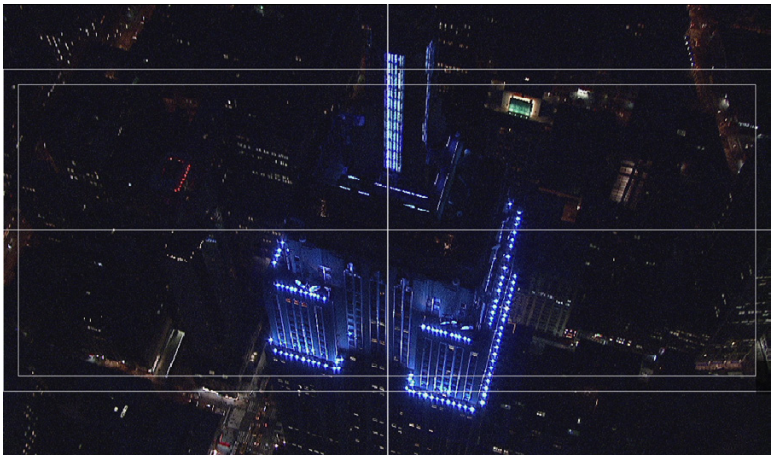
Folder manager tab, cont. [setup]:[files]

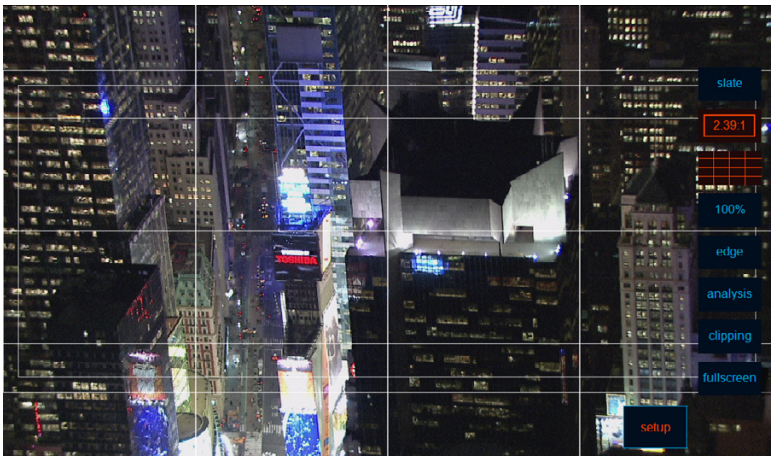
files

Pre-configuring media with folders

A suitable folder structure can also be created on the Cinedeck or a Windows workstation in the Windows Explorer, or on a mac workstation if running an NTFS compatibility program such as the shareware application Tuxera NTFS for Mac.

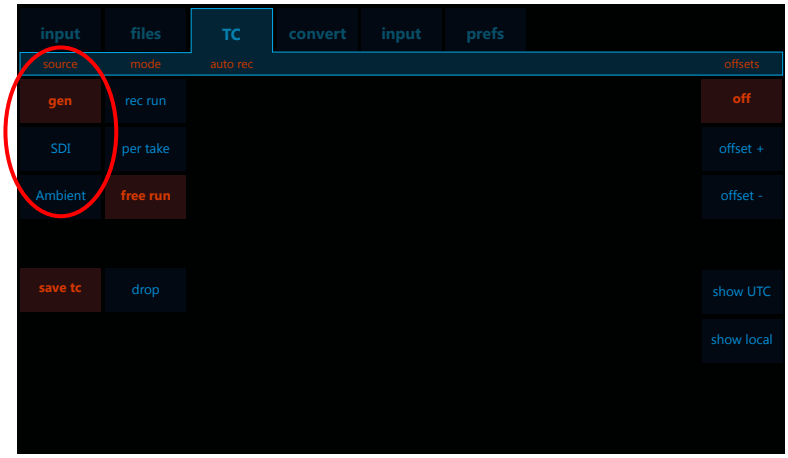






Time code Preferences Tab [setup][TC]

Time code Preferences Tab [setup][TC]



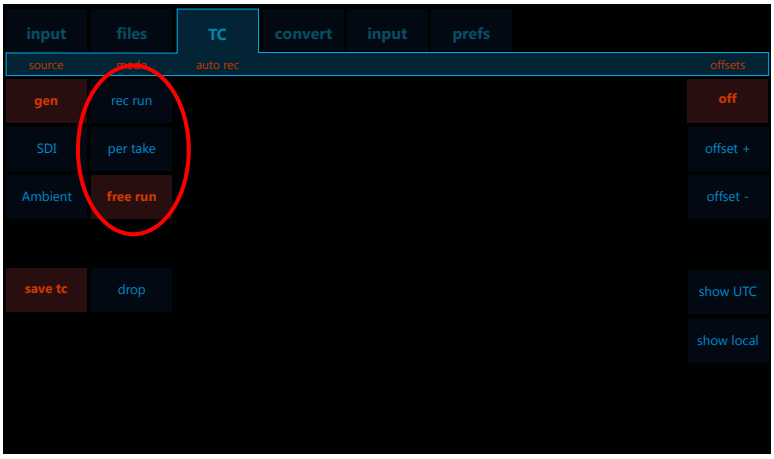
The time code tab allows the user to choose the source for time code for the project and other time code options.

There are three main sources of time code available:

Internally generated
Embedded SDI (LTC, RP188, Serial)
ExSync hardware timecode module [ExSync]*

*Timecode by Ambient GmbH

Internally generated time code [gen]



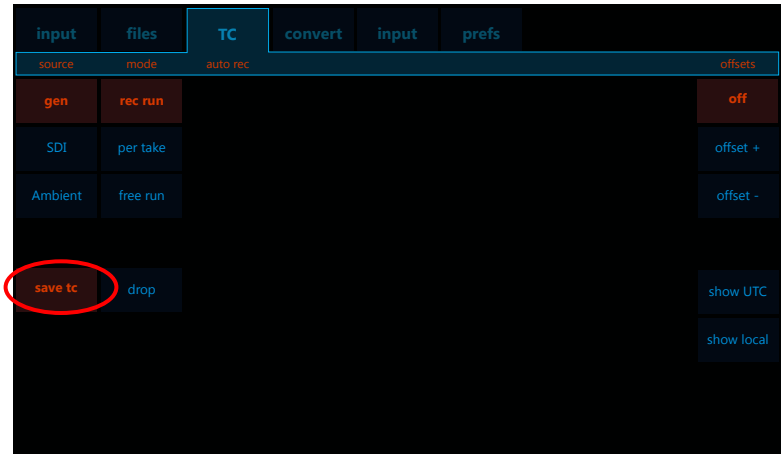
Generated time code has three different run types associated with it:

Record run [rec run] - starts at zero plus any offsets, and increments only while record is active.

Per take run [per take] - starts at zero on each take, plus any offsets

Free run [free run] - starts at zero and runs until the session is terminated or the TC reset slider is used.

Save time code at end of session. [save TC]



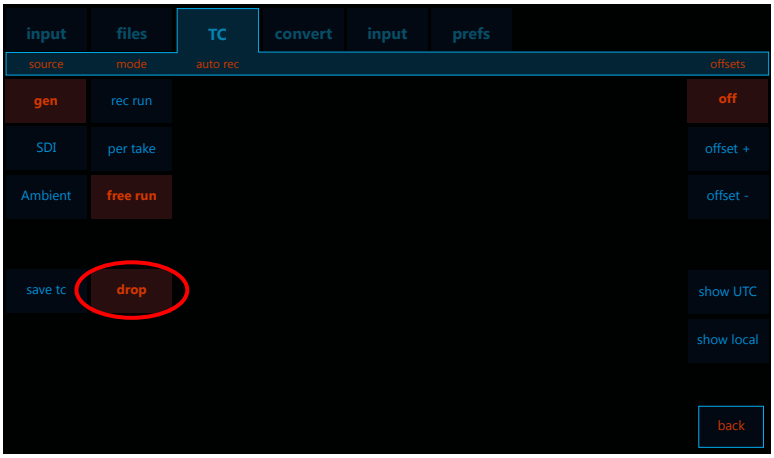
The save time code button [saveTC] enables saving the end time code value when exiting the session or restarting the application.

This is only relevant in generated time code mode.

Time code Preferences Tab, continued [setup][TC]

Generated drop frame time code [drop]

Toggles internally generated time code. When on, internally generated time code will be displayed as SMPTE drop frame time code, and drop frame time code will be saved into the file.



Embedded SDI time code [SDI]

There are three sources of embedded time code recognized in the embedded SDI stream:

LTC, RP188, Serial

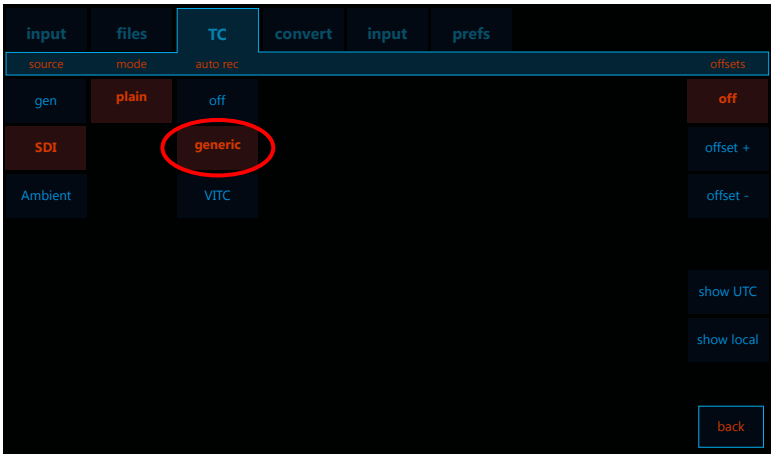
Embedded SDI time code auto-record, generic [generic]

Generated time code has three different run types associated with it:

Record run [rec run] - starts at zero plus any offsets, and increments only while record is active.

Per take run [per take] - starts at zero on each take, plus any offsets.

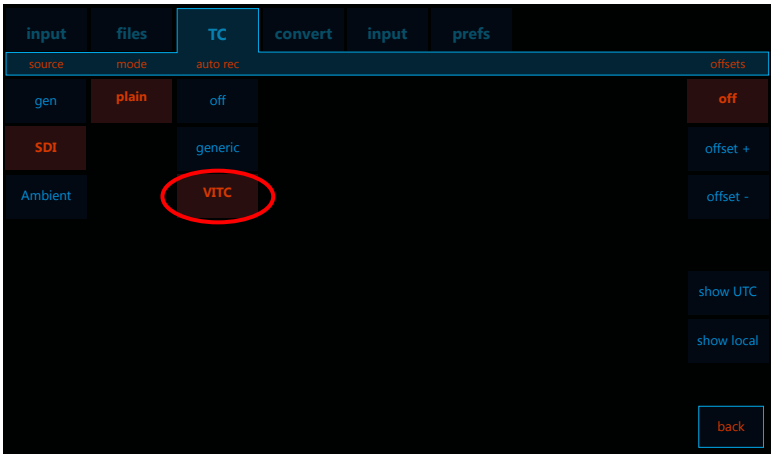
Free run [free run] - starts at zero and runs until the session is terminated or the TC reset slider is used.



Time code Preferences Tab, continued [setup][TC]

Embedded SDI time code auto-record, VITC [future]

Auto record from VITC. Future feature.

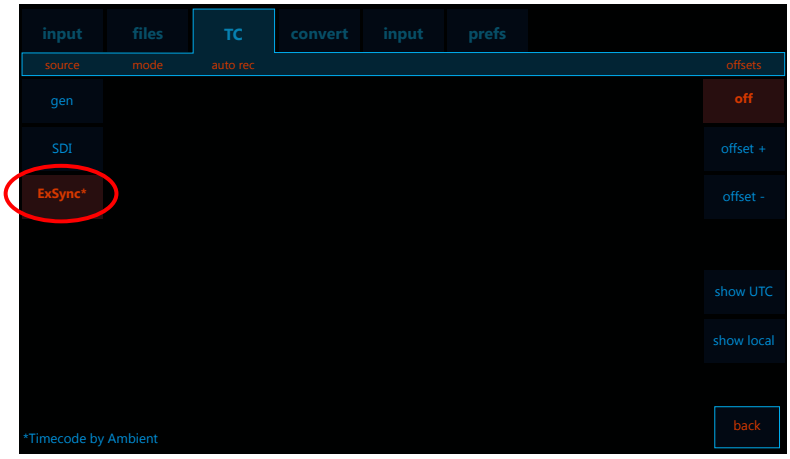


ExSync hardware timecode module [ExSync]

The hardware timecode module can be jammed to an external LTC source. See appendices for cable pin definition and cable types commercially available.

The clock is the same as that in the Ambient ACD301 master slate, so it is extremely precise. With the Exsync module installed, the Cinedeck can operate as the master clock for any device capable of reading LTC time code.

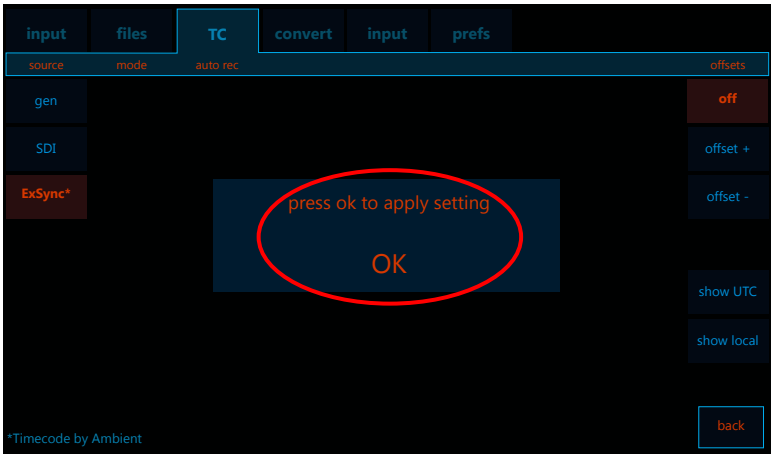
The Exsync timecode module is designed for momentary sync. DO NOT leave the source sync cable plugged in or it will create system instabilty and potentially crash the timecode module clock.



ExSync hardware timecode module [ExSync

When switching to ExSync hardware time-code mode, the application will restart in order to initialize the time code module and sync to the outside source frame rate.

If any changes are made to the signal input settings, this will also require a restart to re-sync to the time code module.



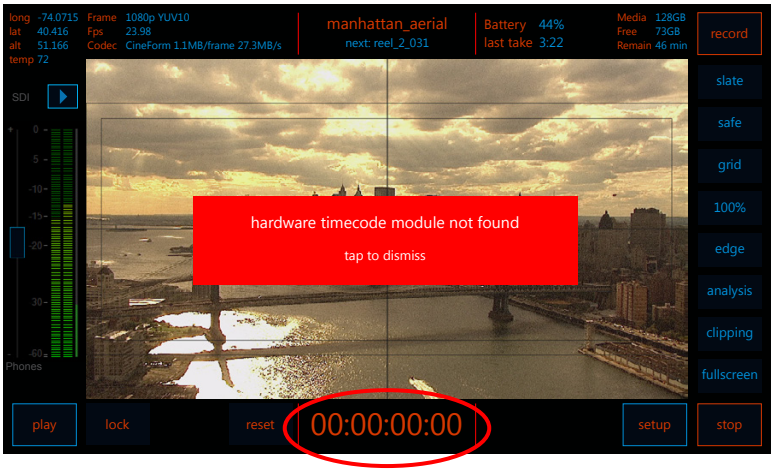
Time code Preferences Tab, continued [setup][TC]

Hardware timecode module not found

If the "hardware timecode module not found" error message appears, you do not have an ExSync hardware timecode module installed or there is a problem with the module.

If you have a module installed and this message appears, contact support.

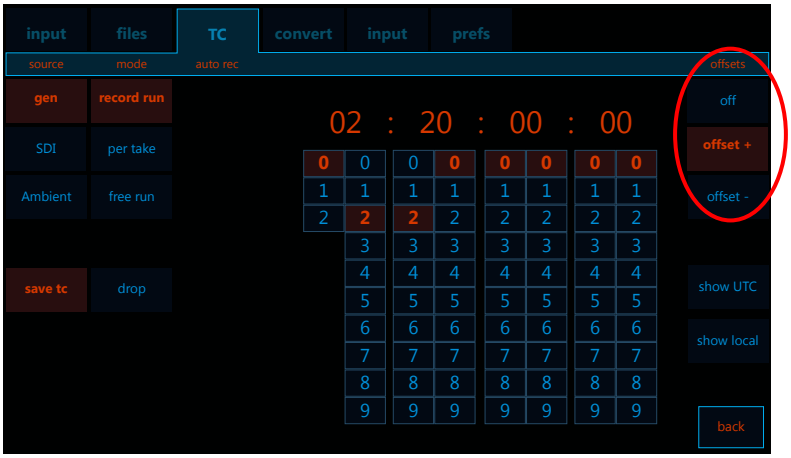
support@cinedeck.com



Time code offsets [offset +][offset -]

Offsets can be set for any timecode mode, for instance to differentiate "reels".

These offsets can be positive or negative, but keep in mind that timecode starting at zero with a negative offset will result in a time code of zero until the counter catches up with the offset.



Time code offsets [offset +][offset -]

Offsets can be set for any timecode mode, for instance to differentiate "reels" by setting the hour ahead incrementally for each reel.

These offsets can be positive or negative, but keep in mind that timecode starting at zero with a negative offset will result in a time code of zero until the counter catches up with the offset.

Time code Preferences Tab, continued [setup][TC]

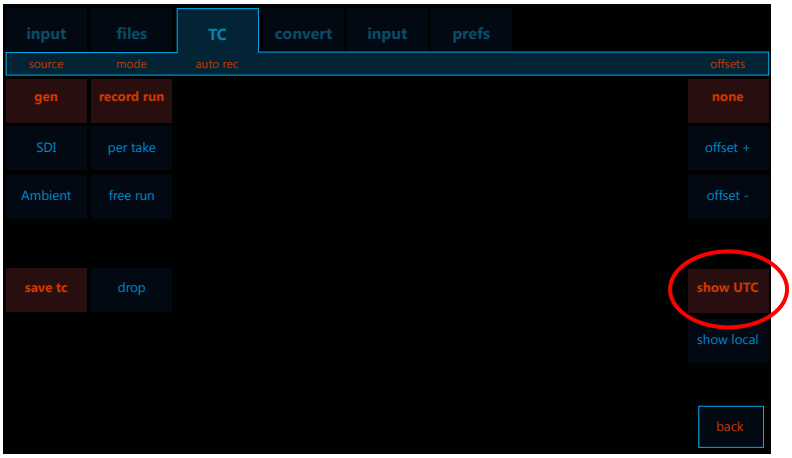
Time code display modes

Internally generated, free run time code can be displayed in four ways:

SMPTE Non-drop: 00:00:00:00
SMPTE Drop frame: 00:00:00;00
UTC Time: hh.mm.ss
Local Time: hh.mm.ss

SMPTE non-drop is default for internally generated.

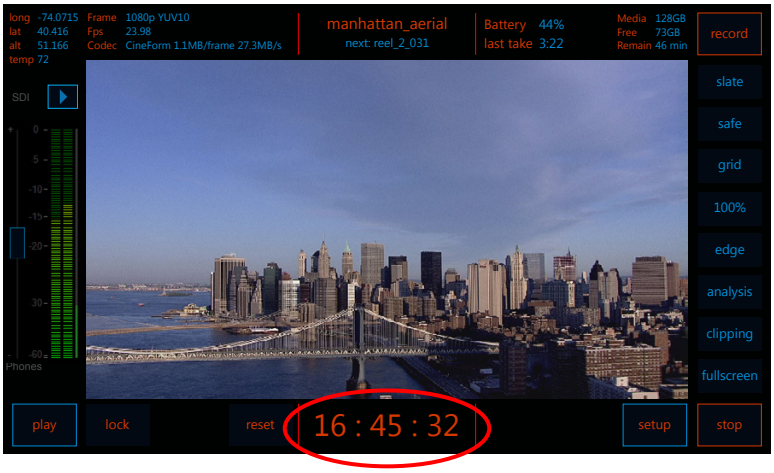
If the external source is drop frame, then the timecode display will be SMPTE drop frame.



Show UTC or Local timecode [show UTC][show local]

If [show UTC] or [show local] is selected, the time code display in the record window will show the respective actual time.

Currently only CineForm records the UTC time as metadata. Other codecs will record only the SMPTE time code.

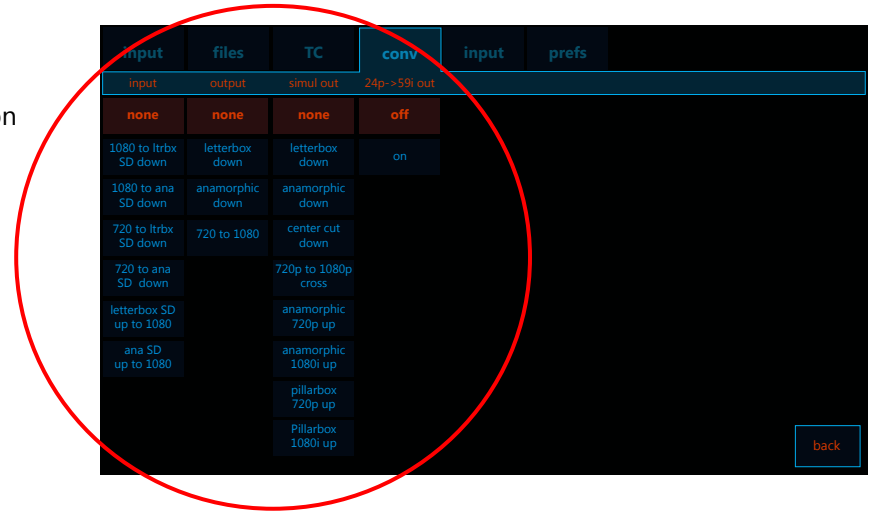


Convert preferences tab [setup][convert]

convert

Convert tab [convert]

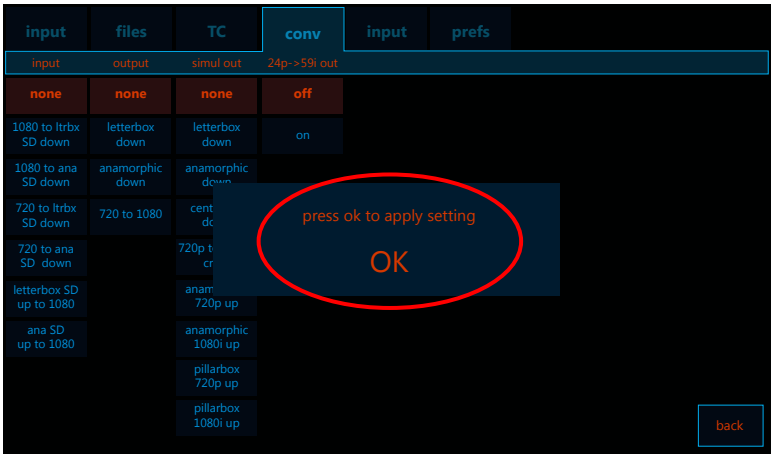
The Cinedeck hardware supports a large number of up, down and cross conversion modes.



convert

Input Up Down and Cross conversion modes [convert]:[input] or [output]

Changing the conversion settings mode requires an application restart.



convert

Input Up Down and Cross conversion modes [convert]:[input] or [output]

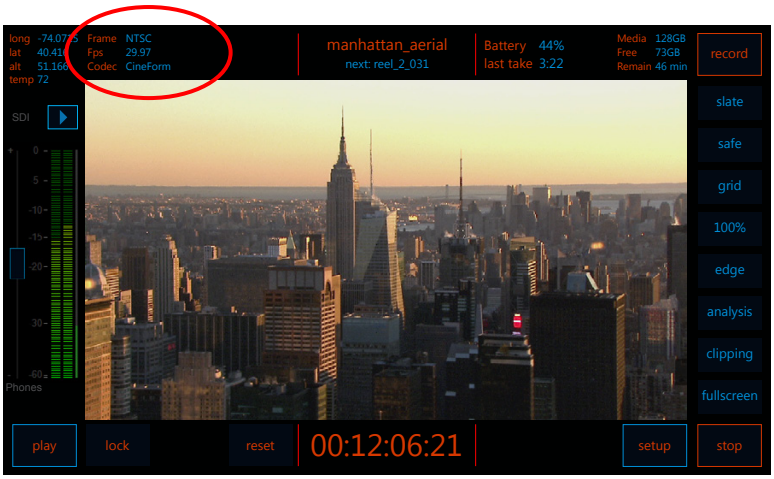
Input settings must be set to the conversion destination mode.

For example. if the coversion mode is set to 1080 downconvert to letterboxed SD, the signal input setting should be set to SD.

Convert preferences tab, continued [setup][convert]

convert

Input Up Down and Cross conversion modes [convert]:[input] or [output]



Input settings must be set to the conversion destination mode.

For example. if the coversion mode is set to 1080 downco nvert to letterboxed SD, the signal input setting should be set to SD.

convert

Video input and output up, down, and cross conversion modes [convert]:[output] [simul out][24p->59i out]

input

Input Up Down and Cross conversion modes [convert]:[input]

none	No video input conversion
1080 to ltrbx SD down	Letterbox, from HD1080 to SD
1080 to ana SD down	Anamorphic HD1080 to SD
720 to ltrbx SD down	Letterbox HD720 to SD
720 to ana SD down	Anamorphic from HD720 to SD
letterbox SD up to 1080	Letterbox video input up conversion
ana SD up to 1080	Anamorphic video input up conversion

output

Single-output Down and Cross conversion modes [convert]:[output]

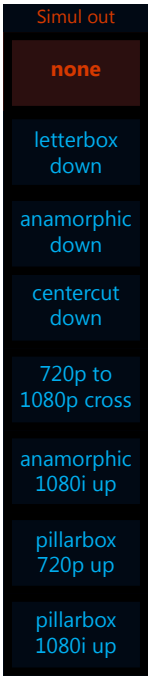
none	No video output conversion
letterbox	Letterbox, from HD1080 to SD
anamorphic	Anamorphic HD1080 to SD
720 to 1080	Letterbox HD720 to HD1080

Convert preferences tab, continued [setup][convert]

Video input and output up, down, and cross conversion modes [convert]:[output] [simul out][24p->59i out]

Convert preferences tab, continued [setup][convert]

Simultaneous-output up, down, and cross conversion modes [convert]:[simul out]



No video output conversion

Letterbox, from HD1080 to SD

Anamorphic HD1080 to SD

Centered, from HD1080 to SD

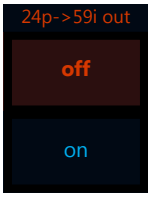
HD720 to HD1080

Anamorphic HD720 to HD1080

Anamorphic SD to HD1080i

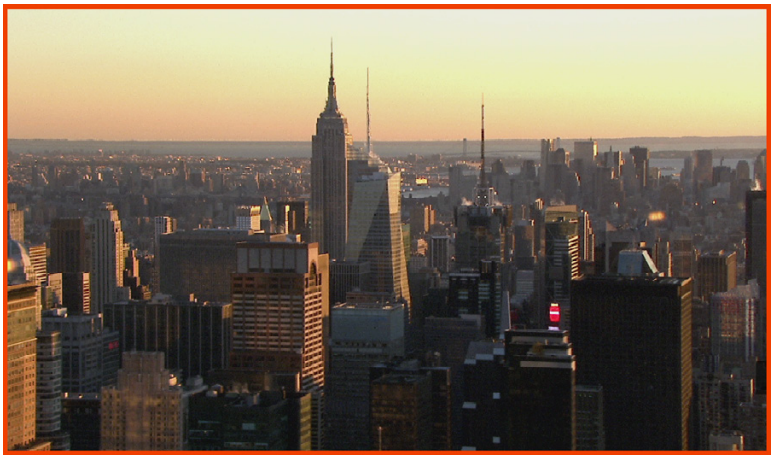
pillarbox HD720 to HD1080 upconvert

24p (23.98p actual) to 59i (59.97) output conversion [convert]:[output]



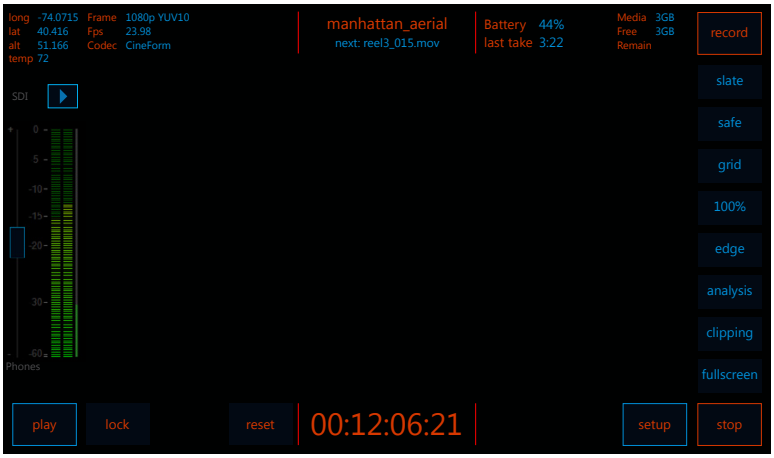
No video output conversion

24p (23.98pactual) to 59.97i output conversion



Update preferences tab [setup][update]

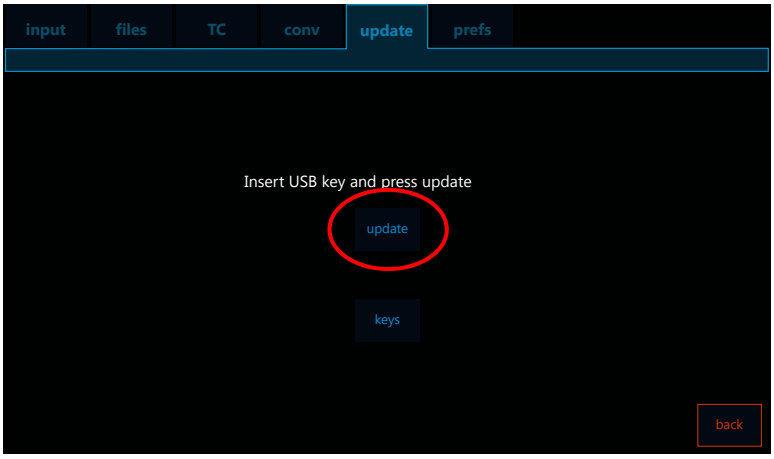
Update preferences tab [setup]:[update]



The update tab opens the software update [update] and feature license key entry [keys] menus.

To update the Cinedeck software:

1) download the zip archive from the FTP
2) ensure that the download software doesn't automatically unzip the zip file or that any anti-virus software doesn't quarantine any files.
3) copy the zip file to a thumb drive.
4) remove any usb or media drive from the cinedeck.
5) power up the cinedeck
6) Once the Cinedeck software has loaded, insert the USB thumb drive with the update zip file on it into a USB port and wait for the drive to appear in the Media status display.



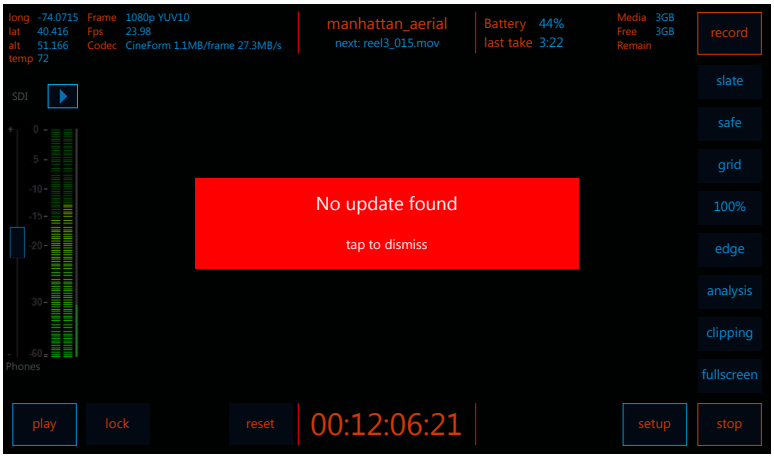
7) Open the update menu by going to [setup]:[update]
8) Press the update button.

The software will exit to Windows while the update runs, then automatically return to the Cinedeck application.

FTP download info:

ftp://ftp.dbox.com
username: cinedeckupdate
password: update123
folder: Cinedeck Program Update

Troubleshooting the update process



If the error message, "no update found" appears:

1) ensure that the download application did not automatically unzip the update file, this often occurs in the Mac OS.

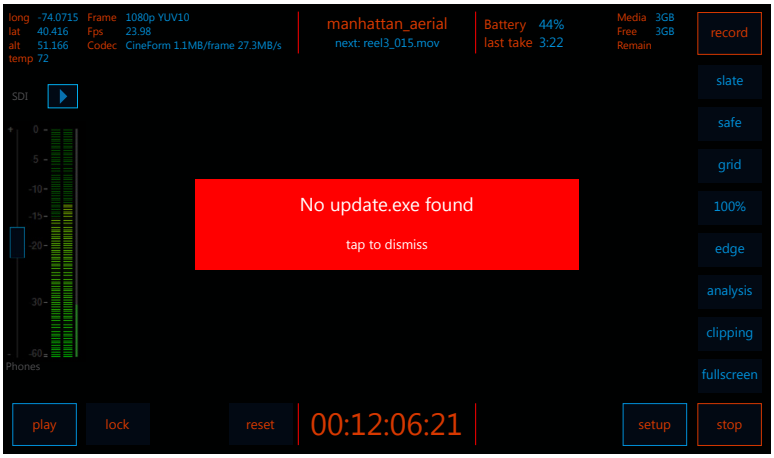
2) check to see that the zip file on the USB thumb drive is a valid archive (not corrupt)

3) ensure that the thumb drive is visible in the media status display.

Update preferences tab, continued [setup][prefs]

update

Update preferences tab [setup]:[update]



Troubleshooting the update process, continued.

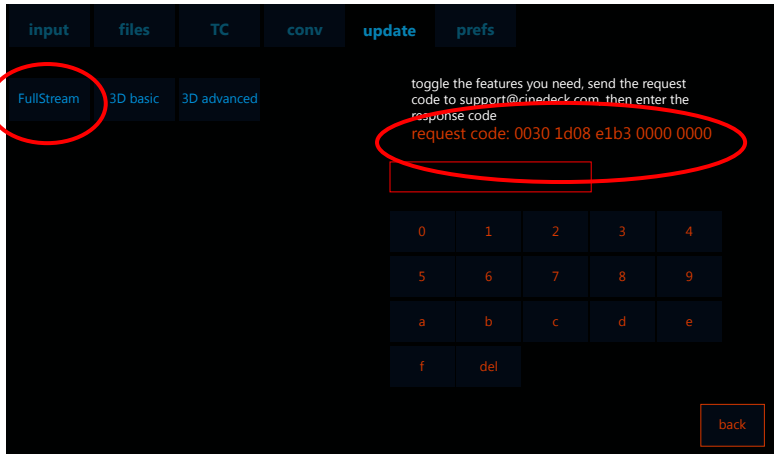
If the error message, "no update.exe found" appears:

1) ensure that the downloaded zip file has "upd.exe" inside it.

2) If there is no "upd.exe", check your anti-virus settings to be sure that the file has not been stripped from the update zip file on download.

keys

Adding feature license keys to the software



If you have purchased licences for optional software features, they must be activated in the keys menu before they will be available.

To activate these features:

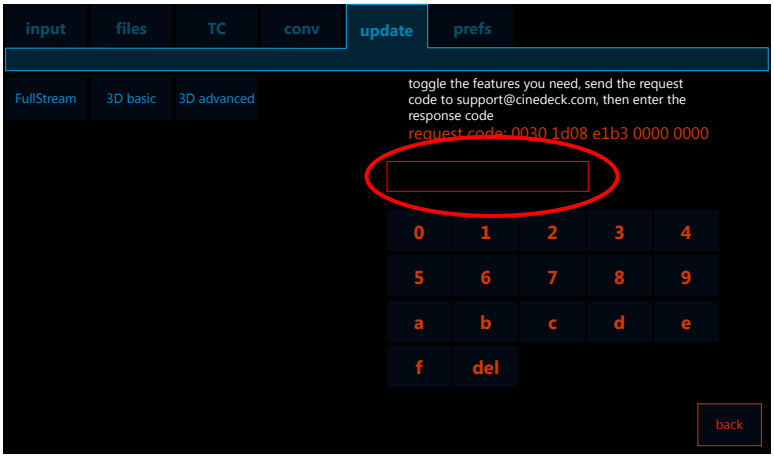
1) Open the keys menu from the [setup]: [update] menu.

2) Select the desired feature.

3) email the request code to:
support@cinedeck.com

keys

License keys challenge code entry



When you have received a reply with the license code from support, enter the code into the license code field using the keypad.

General preferences tab [setup][prefs]

General Preferences [setup]:[prefs]

[main]
Displays general preferences page, shown above.
[grid]
Opens grid and safe frame overlay preferences page.
[clip]
Opens highlight clipping overlay preferences page

[loss stop]
Stops record when input loss is detected (default, on)
[GPS]
Enables awareness of Garmin GPS devices if one is plugged in to the USB port
[Mouse]
Shows mouse pointer if desired. Generally used when a mouse is plugged in .
[rec/stop]
Shows separate record/stop buttons in main UI. Turn off for remote record/stop.
[3Gb/s out]
Enables 3GB/s output on BNC output A (default, off)
[Disable safe]
When on, allows delete or renaming of folders when empty, and take delete.

[drop stop]
Stops record when dropped frames on input is detected (default, on)
[thumbs]
Enables thumbnail display in playback file manager.
[mouse exit]
Enables right-click program exit when mouse is plugged in.
[peak vu]
Enables peak view instead of meter view in audio meters.
[P not PsF]
Enables true progressive (p) input rather than progressive segmented frame (psf)

General preferences tab, continued [setup][prefs]

General Preferences [setup]:[prefs]

Fan control, Battery monitor preferences, application control, and save/load preferences.

Preferences is the default tab when setup is invoked.

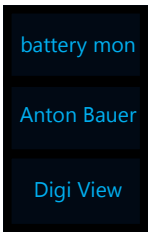
[fan ctrl]
Fan control enable (default on) Control only on during record.

[low]
Sets target fan speed during record to low (default off)

[medium]
Sets target fan speed during record to medium (default off)

[high]
Sets target fan speed during record to high (default off)

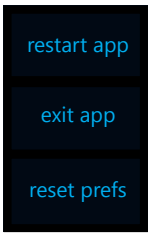
[auto]
Auto sets fan speed to lowest setting available given current system temperature.



[battery mon]
Battery level monitoring enable. (default off)

[Anton Bauer]
Selects Anton Bauer standard monitoring. (default off)

[Digi View]
Selects IDX standard monitoring. (default off)



[restart app]
Restarts the application. Useful for troubleshooting.

[exit app]
Exits the Cinedeck application to the Windows desktop.

[reset prefs]
Resets preferences to defaults. Useful for troubleshooting.

[save prefs]
Saves preferences file to a USB thumb drive if inserted in USB port

[load prefs]
Loads preferences file from a USB thumb drive if inserted in USB port

Appendices:

Field Operating System Restore ("Factory Reset") Instructions:

In the case of problems with the operation of the Cinedeck, there are some issues that are related to the operating system and may most simply be solved by resetting the Cinedeck to its factory settings. This is usually the result of changing settings or installing 3rd party software that is not compatible with the Cinedeck version of the Windows Embedded operating system.

In general, it is a good idea to keep your restore disk up to date so that in the case of a field restore, your software will be current without installing it separately.

The software update file is located at:

address: ftp://ftp.dbox.com
username: cinedeckupdate
password: update123
Folder: Cinedeck Program Update

Restoring the Cinedeck to factory settings:

NB: This will erase files you have saved or created on the C: drive previously, including any programs installed that are not part of the Cinedeck environment.

1) Insert the OS restore thumb drive in one of the two USB ports located on the right end panel of the Cinedeck.
2) Power on the Cinedeck
3) Let the restore run through fully. You will see a progress bar to indicate time remaining.
4) When the restore is complete and the cursor is flashing at the bottom of the screen, (about 3-4min) power off the Cinedeck by holding down the power switch for 3-4 seconds.
5) Remove the USB thumb drive.

NB: At this point, make sure you have a fresh battery or wall power for the Cinedeck.

6) Power on the cinedeck
7) Let the Cinedeck start up completely and the Cinedeck software load.
8) Go to setup:prefs
9) Press "reset prefs" (this is simply for good measure)
10) Go to setup:prefs
11) Press "exit app"

NB: Skip steps 12 through 14 if there is no firmware update dialog pop-up; you can simply launch the cinedeck program from the desktop instead.

12) On the screen in Windows Desktop, there may be a firmware upgrade dialog pop-up window.
13) Press "ok" to update the firmware

NB: Do not shut down or power off the Cinedeck while the firmware upgrade runs!!
It will damage the device.

14) Once the firmware upgrade has completed, it will prompt you to press 'restart' to complete the process.

15) It may be necessary to modify the battery meter COM port setting if you do not see a reading in the battery meter display when a battery is connected and the battery meter preferences setting is on.
SEE: "Setting the battery meter COM port" in this guide.

Please email support@cinedeck.com if you have any issues or need help with this process.

Cinedeck Operating System Field Restore Disk Update instructions

NB: In general, it is a good idea to keep your restore disk up to date so that in the case of a field restore, your software will be current without installing it separately.

The restore disk update file is located at:

ftp://ftp.dbox.com
username: cinedeckupdate
password: update123
Folder: Restore Disk Update

NB We suggest an FTP client like filezilla or similar for the download. It is ~850MB (total OS replacement)

Installation instructions: Ideally this is done on a Windows PC, or on the Cinedeck with keyboard and mouse.

Updating the restore disk

1) Download the image zip archive "xpe full.zip" from the ftp.
2) Extract the contents of the zip file "xpe_full.zip" to the desktop of the Cinedeck.
3) Remove USB or Media drive from the Cinedeck.
4) Insert the restore disk in the USB port on the Cinedeck
5) The restore disk should show up as the D: drive
6) In the Windows Explorer, navigate to D:\home\partimag and delete the folder "xpe-full" (remember, you can plug in a USB mouse to make this easier)
7) Copy the "xpe-full" folder from the desktop to: D:\home\partimag\
8) Leave the thumb drive in the usb port
9) Push the power button on the side of the Cinedeck and let it shut down.

Cinedeck Bootable BIOS Update Disk Creation Instructions

Download location for the BIOS update disk components:

ftp://ftp.dbox.com
username: cinedeckupdate
password: update123
Folder: BIOS_disk

Making the BIOS update USB thumb drive:
[**COMMANDS** shown in Blue]

1) Format the thumb drive:
   1. Open a command prompt window
   2. Type: **DISKPART** This will start the disk partition program.
   3. Type: **LIST DISK** This will list the available disk partitions to format.
   4. The size of the partitions will tell you which partition is the USB thumb drive. It should be the smallest by far.

NB! You will be formatting the drive, which will erase ALL data!

Be sure you choose the correct drive, the USB thumb drive, not your 10TB video RAID!!

2) Select the correct disk, usually DISK1, then type:
   1. **CLEAN**
   2. **CREATE PARTITION PRIMARY**
   3. **FORMAT FS=FAT32 QUICK**

   If for some reason this last command fails, right-click "my computer" in the Windows Explorer and select: "computer management." In computer management, select "disk management," then right click the partition you created and select "format." In the format dialog, select "FAT32" and "quick format".

   4. **ACTIVE**
   5. **ASSIGN**
   6. **EXIT**

3) Once the above is complete, Unzip the contents of "BIOS_update_disk.zip" to a temporary folder, then copy all files and folders to the new partition on the thumb drive.

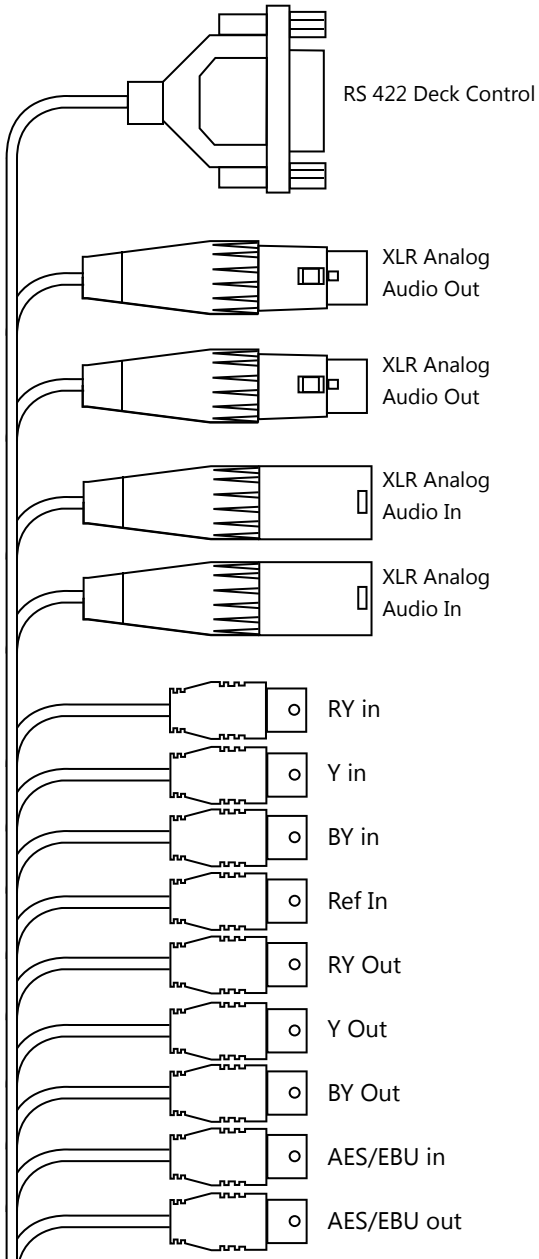
4) After the copy is complete, Open a command prompt window and type
   1. **D:** (or the stick drive letter, if not D:)
   2. **CD UTILS\WIN32**
   3. **MAKEBOOT.BAT**

   Follow the instructions from the MAKEBOOT program to complete the task.

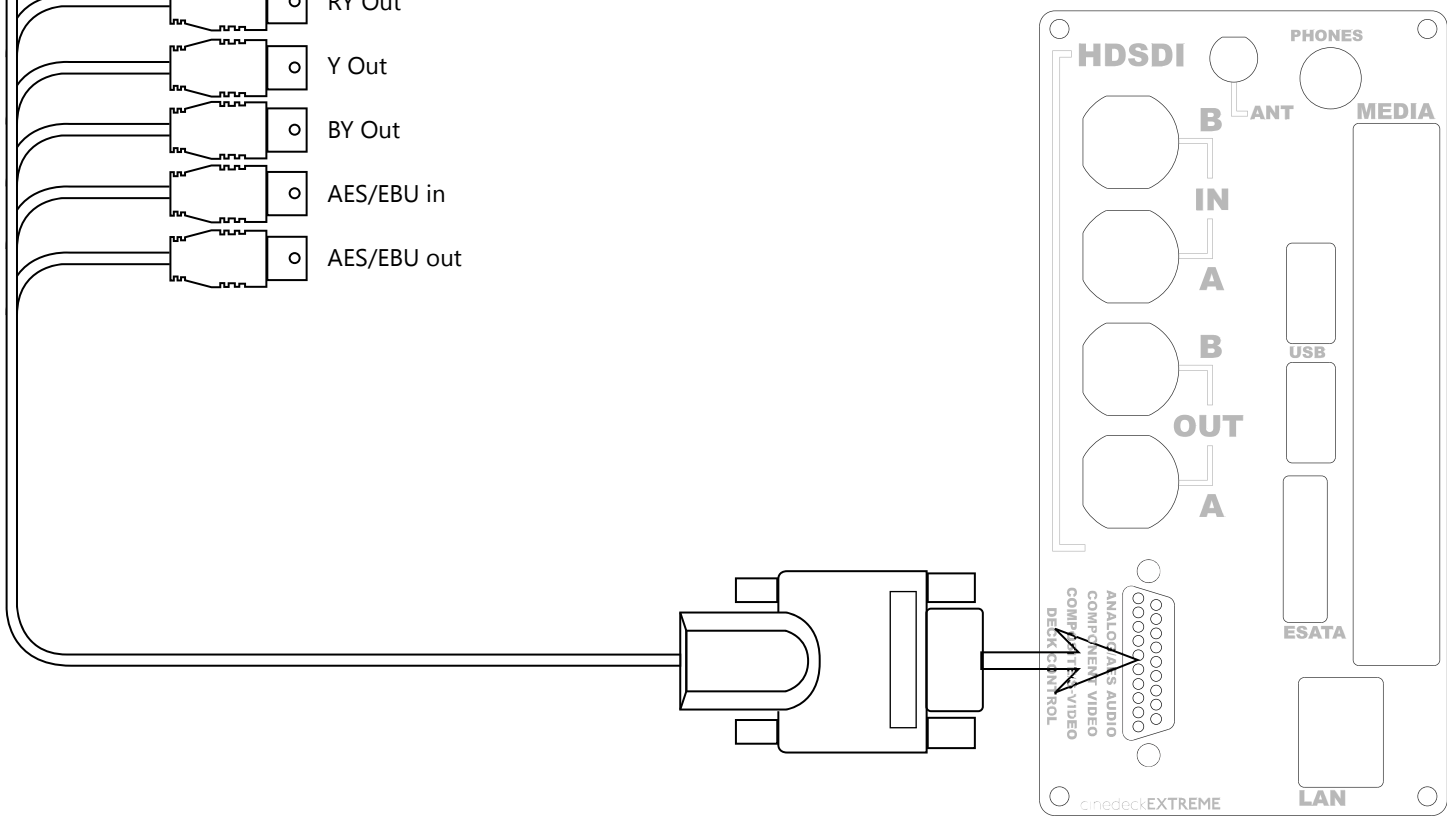
5) Eject the thumb drive Windows using the "safely remove hardware" button on the Windows task bar.

Please contact support@cinedeck.com if you have about this process.

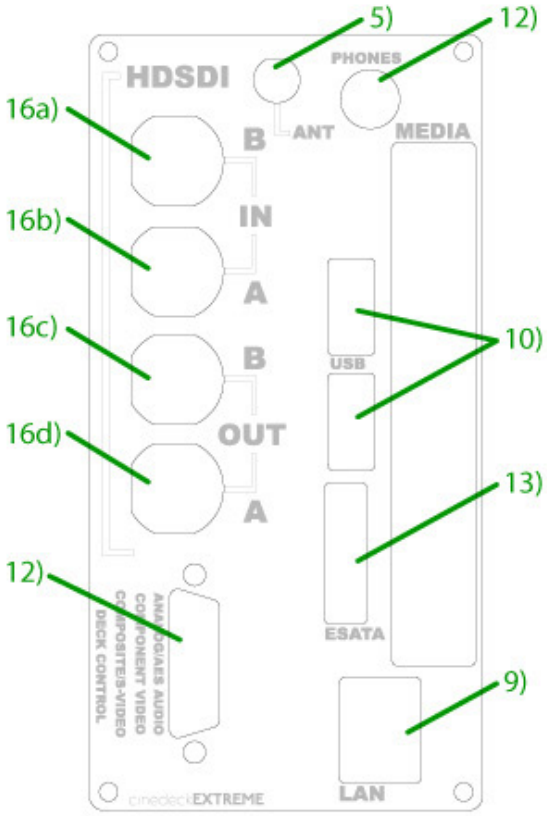
Breakout cable connections



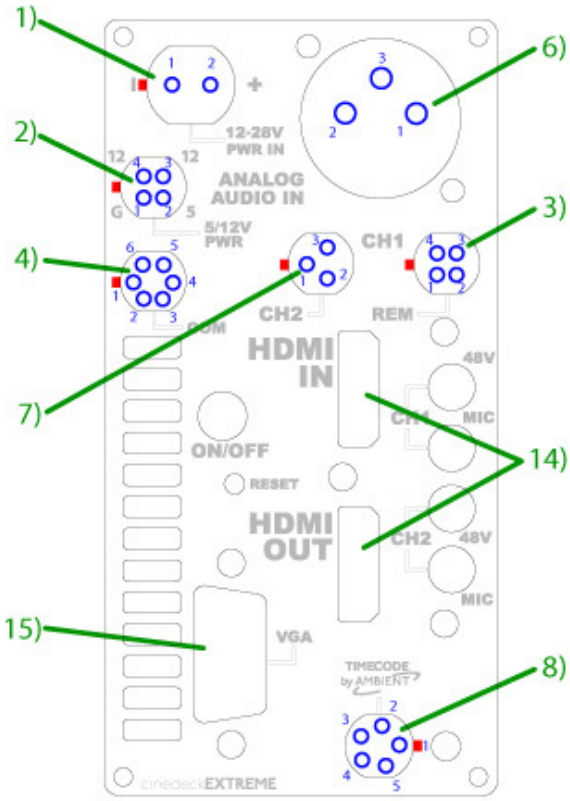
Breakout Pin (MicroD-25-M)	Label	Connector	Pin Number	Cable
1	AES/EBU Out (+)	75Ohm/F/BNC/(P10)	A1	75Ohm 1C+S
2	RS422 Pin 3	DSUB/9/F/(P2)	3	9C+S
3	RS422 Pin 7	DSUB/9/F/(P2)	7	
4	DIGITAL GROUND	DSUB/9/F/(P2), 75Ohm/F/BNC/(P10), 75Ohm/F/BNC/(P11)	1	
5	B-y Out (+)	75Ohm/F/BNC/(P9)	A1	75Ohm 1C+S
6	R-y Out (+)	75Ohm/F/BNC/(P7)	A1	75Ohm 1C+S
7	B-y In (+)	75Ohm/F/BNC/(P5)	A1	75Ohm 1C+S
8	R-y In (+)	75Ohm/F/BNC/(P3)	A1	75Ohm 1C+S
9	Audio In Left (2)	XLR/F/(P14)	2	3C+S
10	Audio In Left (3)	XLR/F/(P14)	3	
11	Audio Out Left (2)	XLR/M/(P12)	2	3C+S
12	Audio In Right (3)	XLR/F/(P15)	3	3C+S
13	Audio In right (2)	XLR/F/(P15)	2	
14	AES/EBU In (+)	75Ohm/F/BNC/(P11)	A1	75Ohm 1C+S
15	RS422 Pin 8	DSUB/9/F/(P2)	8	
16	RS422 Pin 2	DSUB/9/F/(P2)	2	
17	GROUND	75Ohm/F/BNC/(P4), 75Ohm/F/BNC/(P8)	A2	
18	Y Out (+)	75Ohm/F/BNC/(P8)	A1	75Ohm 1C+S
19	GROUND	75Ohm/F/BNC/(P3), 75Ohm/F/BNC/(P5), 75Ohm/F/BNC/(P7), 75Ohm/F/BNC/(P9)	A2	
20	Y In (+)	75Ohm/F/BNC/(P4)	A1	75Ohm 1C+S
21	GROUND	XLR/M/(P12), XLR/M/(P13), XLR/F/(P14), XLR/F/(P15)	1	
22	REF In (+)	75Ohm/F/BNC/(P6)	A1	75Ohm 1C+S
23	Audio Out Left (3)	XLR/M/(P12)	3	
24	Audio Out Right (2)	XLR/M/(P13)	2	3C+S
25	Audio Out Right (3)	XLR/M/(P13)	3	



Cinedeck I/O Pin Definitions: Serial numbers 500 and higher.



Right Side I/O Panel



Left Side I/O Panel

1) Power in:
pin1 GND
pin2 VCC (12V min, 30V max)

Receptacle: Lemo EGG.1B.302.CLL
Plug: Lemo FGG.1B.302.CLADxx**

2) 5/12 aux power out
pin1 GND
pin2 5V (1a max)
pin3 12V (1a max)
pin4 12V (1a max)

Receptacle: Lemo EGG.0B.304.CLL
Plug: Lemo FGG.0B.304.CLADxx**

3) 4 pin Remote
pin1 GND
pin2 Remote +
pin3 Remote -
pin4 3.3V (LED) power

Receptacle: Lemo EGG.0B.304.CLL
Plug: Lemo FGG.0B.304.CLADxx**

4) COM I/O
pin1 GND
pin2 RX
pin3 TX
pin4 PWR GND
pin5 12V
pin6 NC

Receptacle: Lemo EGG.0B.306.CLL
Plug: Lemo FGG.0B.306.CLADxx**

5) Antenna
RP SMA

6) Balanced Audio XLR, CH1
pin1 GND
pin2 Signal+
pin3 Signal -

7) Balanced Audio Lemo, CH2
pin1 GND
pin2 Signal+
pin3 Signal -

Receptacle: Lemo EGG.0B.303.CLL
Plug: Lemo FGG.0B.303.CLADxx**

8) Timecode
pin1 GND
pin2 TC in
pin3 ASCII (Aaton) I/O
pin4 Tune out
pin5 TC out

Plug: Lemo FGG.0B.305.CLADxx**

9) LAN
RJ45

10) USB
USB-A

11) Phones
1/8" stereo jack

12) A/V Breakout*
Molex 25pin

13) ESATA
Standard Single Lane ESATA

14) HDMI
HDMI B female

15) VGA
Standard 15pin VGA

16) HDSDI
Standard BNC
16a) HDSDI
Dual link B input
16b) HDSDI
Single link YUV, Dual link A , 3G input
16c) HDSDI
Dual link B, Converted output
16d) HDSDI
Single link YUV, Dual link A, 3G output

*See page 2 for Pin definition
** where "xx" indicates the diameter of cable in mm.
eg FGG.0B.303.CLAD31 would indicate cable diameter of 3.1mm

Setting up the docking station for use with the Cinedeck Extreme

The Cinedeck eSATA & USB Docking Station easily connects all 2.5" or 3.5" SAT hard drives, allowing PC or MAC system to instant access and store data.

FEATURES:

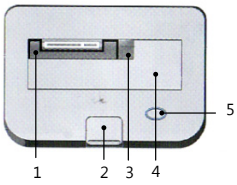
- Supports all 2.5" & 3.5" SATA HDDs
- Supports USB 2.0 Transfer speed up to 480 Mbps
- Supports eSATA I/II Transfer speed up to 3 Gbps
- Windows and Mac OS Compatible
- Compact Docking Station Design maximizes Heat Dissipation & Exhaust
- Patented Design: HDD Ejection Mechanism
- Windows Vista Ready!

SPECIFICATIONS:

- Model#: ST0005U
- Interface: SATA to eSATA / USB 2.0
- USB 2.0 Transfer Rate: up to 480 Mbps (Max)
- eSATA Transfer Rate: up to 3 Gbps (Max)
- SATA Compatible: SATA I & II
- HDD Compatible: All 2.5" or 3.5" SATA
- OS Compatible: Windows Vista/ XP/ 2003/ 200/ NT/ 98/ 95 Mac 10.3 or later
- Material: ABS Plastic
- Power: 12V/2A
- Dimension: (L x W x H) 5.12" × 3.55" x 2.56" 130 × 90 × 65 mm

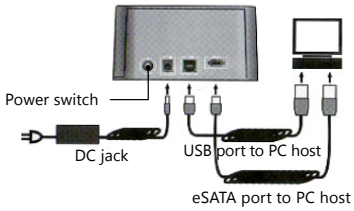
Hardware Installation

1. TOP

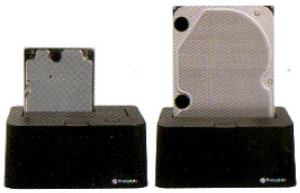


1. Push button to release HDD from SATA connector
2. Button
3. For 2.5" HDD
4. For 3.5" HDD
5. Power and Access LED

2. BACK

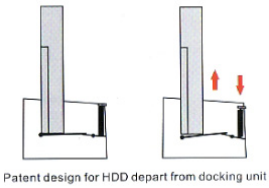


Disk Installation



Install 2.5" HDD Install 3.5" HDD

Hard Drive not included*



Patented design for HDD removal from docking unit

NOTE: Hard drive(s) not properly formatted or partitioned will not work with enclosures.

Care and feeding of SSD media

SSD media is different from traditonal spinning hard drives in two important ways.

1) Low level formatting has an adverse affect on the flash media
2) Disk optimization is achieved by "trim" rather than "degragmentation", and with certain controllers, the "secure erase" process.

Restoring SSD media to "factory new" performance

SSDs will lose performance over time, which will have a negative impact on recording capability.

Each type of SSD has its own process for returning it to factory new:

Patriot Torqx
The Process for the Patriot Torqx is quite simple and the full step-by-step is given on p70.

OCZ Vertex
The process for the OCZ Vertex is similar to that of the Patriot Torqx and is given on p71

OCZ Vertex2 (and other Sandforce-based controllers)
Sandforce-based SSDs must be "secure erased" to return them to factory performance. This is a rather involved process. If you purchased Vertex 2 media from Cinedeck, you will have a USB thumb drive that has the appropriate software on it. See page 72.

You will need a USB keyboard in addition to the USB key for this process.

Special note regarding PhotoFast RAID media

Unlike other SSDs, the PhotoFast SSDs are NOT hot-swappable. Care should be taken to insert the media before powering up the Cinedeck, and to shut down the Cinedeck before removing the media.

WARNING: Only SSD media purchased from Cinedeck are ready to use. Other SSDs must be prepared following the directions on page 9 to prevent error and data loss.

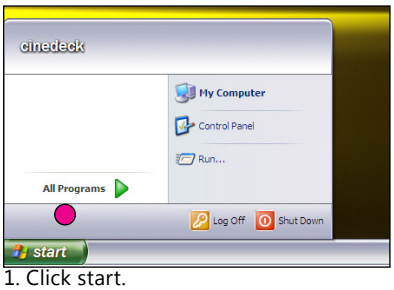
Setting up new SSD media for use with the Cinedeck Extreme

SSD media purchased from any other vendor must be prepared before use with the Cinedeck EXTREME to disable write caching on the device and to format it using the correct file system. All data on the SSD will be lost in preparation for use with the Cinedeck EXTREME. Perform these functions on the Cinedeck EXTREME itself, rather than attempting to perform them on a computer; this is necessary to ensure proper functionality.

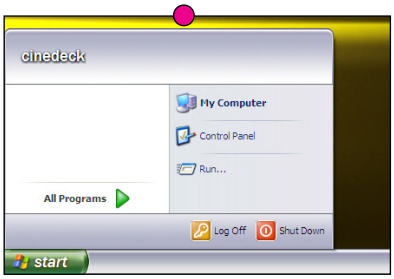
NOTE: A USB mouse can be connected to the Cinedeck EXTREME to perform these functions without using the touchscreen and is recommended for ease of operation.

Boot up the Cinedeck EXTREME, quit to the OS by tapping exit in the main PREFERENCES page. [setup][prefs][exit app] Insert the new SSD to be prepared, and follow the instructions below. In order to context-click using the touchscreen, hold down on one spot for 2-3 seconds. (This is equivalent to right-clicking with a mouse.)
Follow these steps to prepare a new SSD:

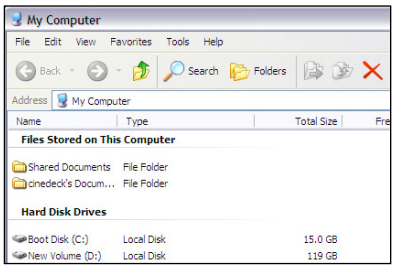
WARNING: Failure to follow these procedures will result in improper operation and may cause future data loss in operation.



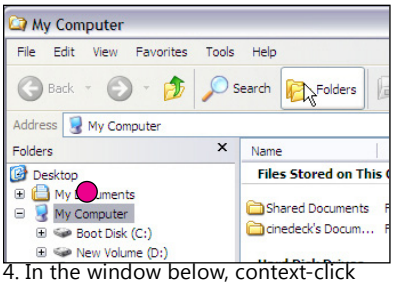
1. Click start.



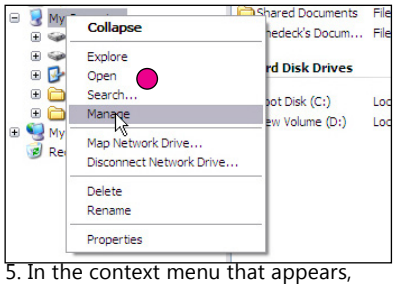
2. Click My Computer.



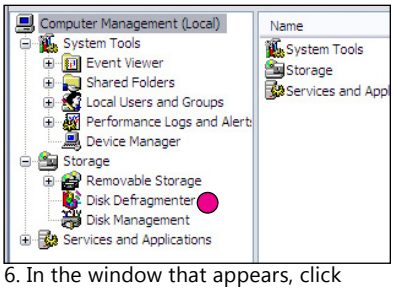
3. On the window that appears, click the large button labeled Folders.



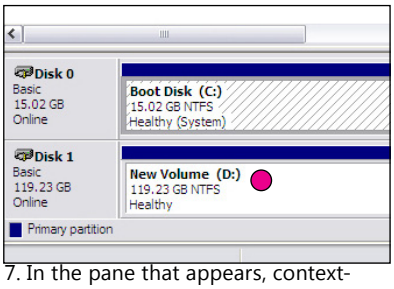
4. In the window below, context-click (by holding in place on the touchscreen or right clicking with an attached mouse) on My Computer.



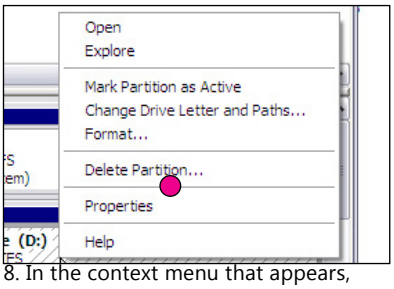
5. In the context menu that appears, click Manage.



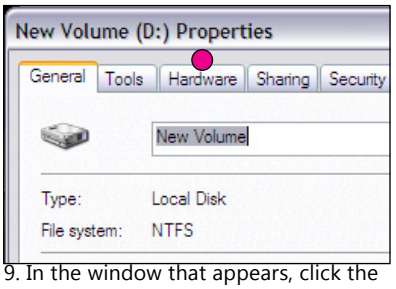
6. In the window that appears, click Disk Management.



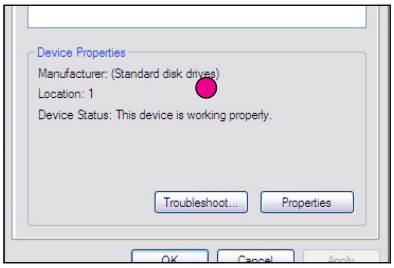
7. In the pane that appears, context-click on Disk 1 (NOT Disk 0), your new SSD. Confirm
that size of the device to make sure it is the SSD and not the onboard unit storage.



8. In the context menu that appears, click Properties.

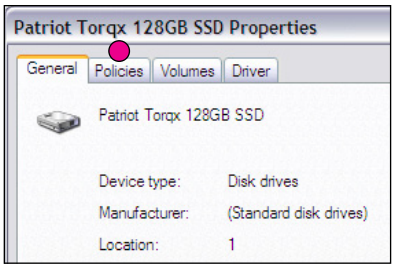


9. In the window that appears, click the Hardware tab.

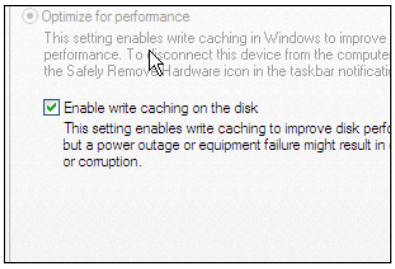


10. At the bottom of the Hardware tab, click Properties.

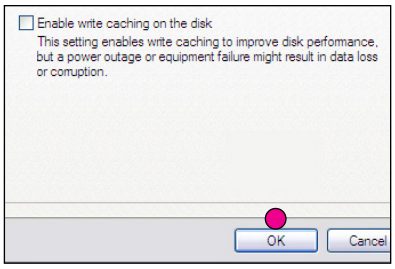
Setting up new SSD media for use with the Cinedeck Extreme, continued



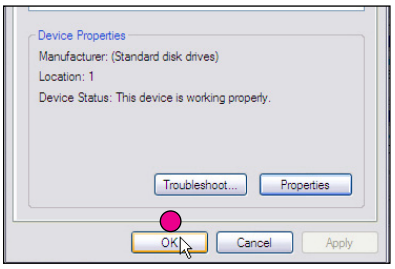
11. In the window that appears, click the Policies tab.


Optimize for performance
This setting enables write caching in Windows to improve
Enable write caching on the disk
This setting enables write caching to improve disk perf
but a power outage or equipment failure might result in
or corruption.

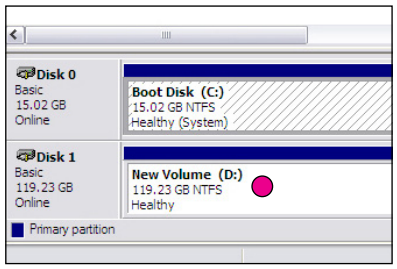
12. On the Policies page, UNCHECK Enable write caching on the disk.


Enable write caching on the disk
This setting enables write caching to improve disk performance,
but a power outage or equipment failure might result in data loss
or corruption.
OK
Cancel

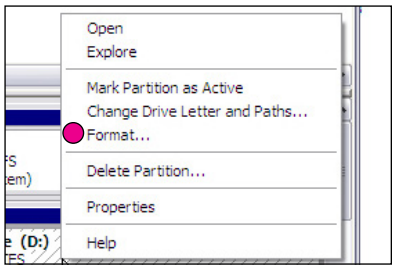
13. With Enable write caching on the disk now UNCHECKED, click OK on the bottom of the window to confirm.



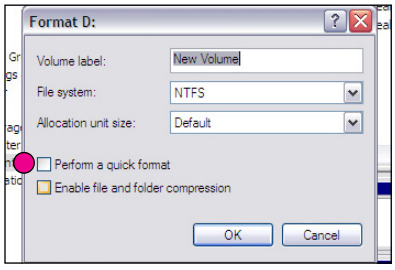
14. Click OK on the bottom of the Hardware page to confirm.



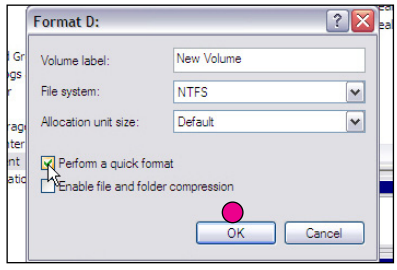
15. Context-click again on Disk 1 (NOT Disk 0), your new SSD. Confirm that size of the device to make sure it is the SSD and not the onboard unit storage.



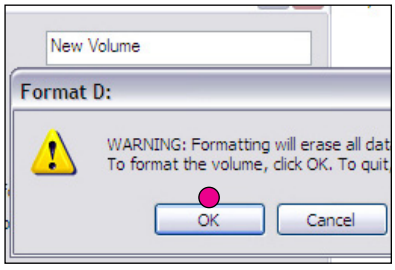
16. In the context menu that appears, click Format.



17. In the window that appears confirm that
File system is set to NTFS, and check the box for Perform a quick format.
WARNING: This is not optional for SSD drives. You must perform a quick format.



18. With Perform a quick format checked, click OK to confirm.



19. In the window that appears, click OK again to format the SSD. Formatting the SSD will be rapid.

The SSD is now set for proper operation and formatted for use with the Cinedeck EXTREME. You may close all windows and relaunch the Cinedeck software by double tapping on the cinedeck.exe application on the desktop, or by restarting the unit.

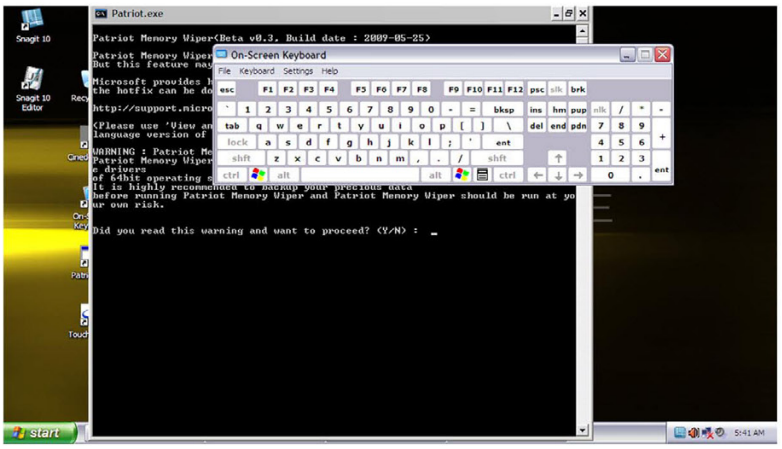
Using the Patriot trim utility for Patriot Torqx SSD media

1) Exit the Cinedeck software to the desktop (setup:prefs:exit app)

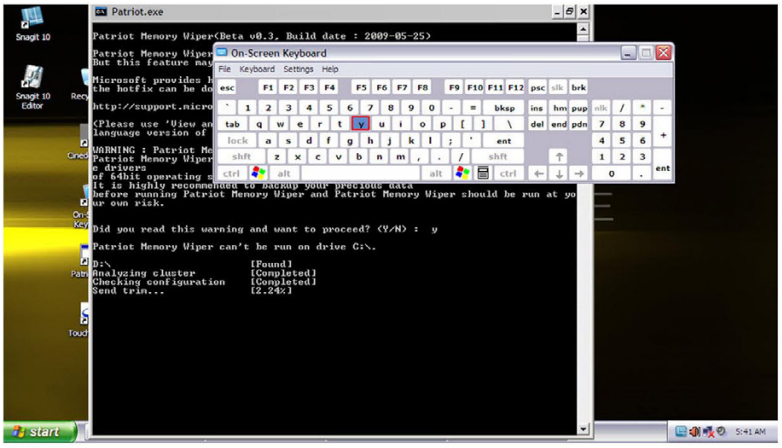
2) Double-click the On-Screen Keyboard icon to open the keyboard.

3) Double-click Patriot.exe icon to start the trim utility

4) Press “Y” on the keyboard to start the trim.

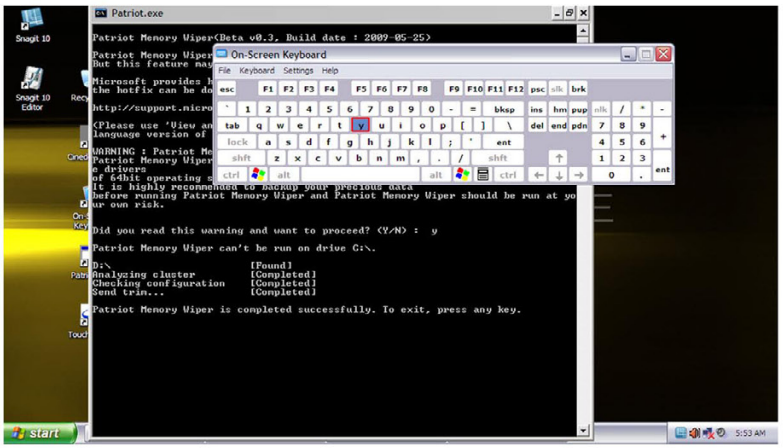


You will see progress in %. The trim process takes about 10min on a 128GB SSD.



5) When the trim process is complete, press any key on the keyboard to close the trim window.

You can now close the keyboard and start the Cinedeck application from the icon on the desktop.


Patriot.exe
Patriot Memory Wiper<Beta v0.3, Build date : 2009-05-25>
On-Screen Keyboard
File Keyboard Settings Help
Did you read this warning and want to proceed? (Y/N) : y
Patriot Memory Wiper can't be run on drive C:\.
D:\ [Found]
Analyzing cluster [Completed]
Checking configuration [Completed]
Send trim... [Completed]
Patriot Memory Wiper is completed successfully. To exit, press any key.
start
5:53 AM

Using the OCZ trim/garbage collection utility

The OCZ trim or garbage collection utility can be used with the following SSDs

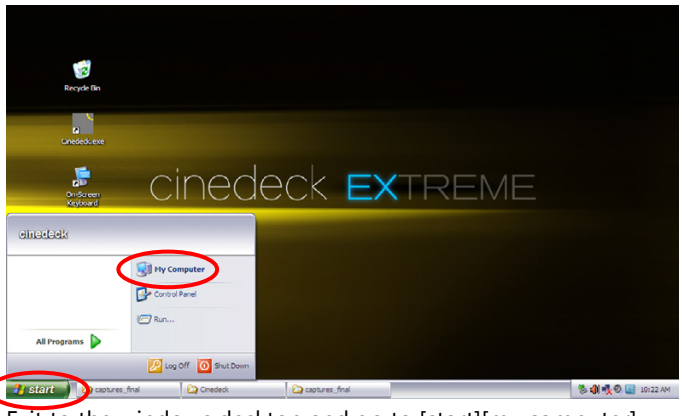
1) Vertex (not Vertex2)
2) Vertex Turbo
3) Vertex EX
4) Agility series
5) Solid 2 series

OCZ Vertex2 Secure Erase process for restoring SSD performance

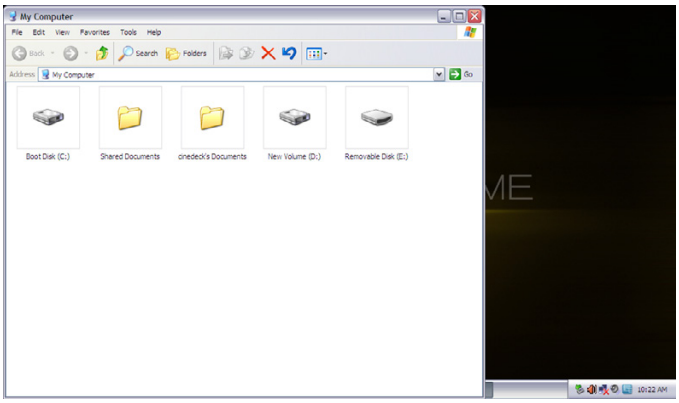
The secure erase process can be used with the following SSDs

1) Vertex2
2) Vertex LE
3) Agility2

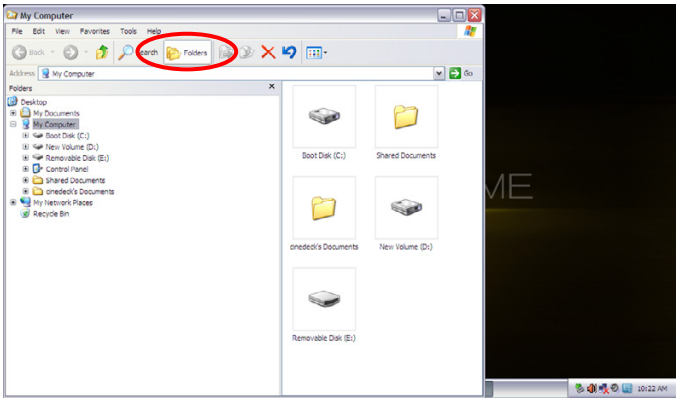
Setting the battery meter COM port



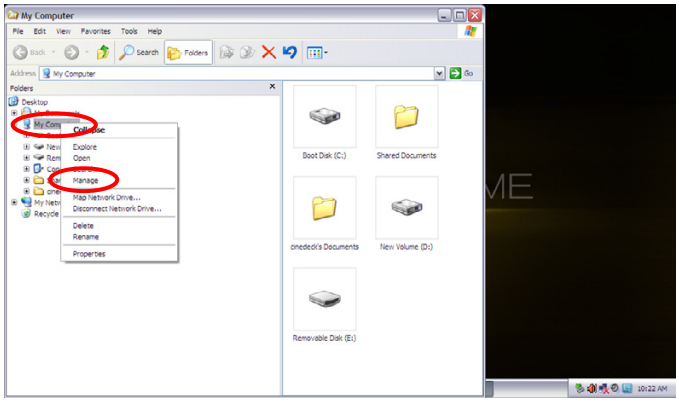
Exit to the windows desktop and go to [start][my computer]



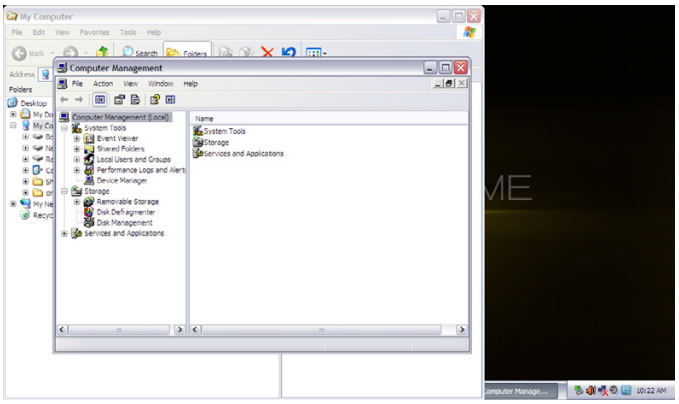
This will open an explorer window



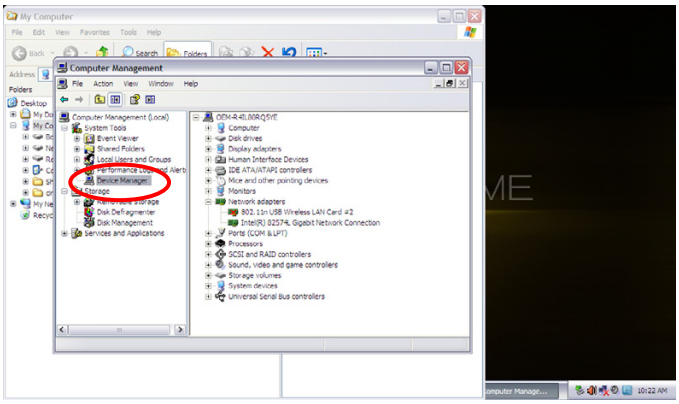
Select folder view



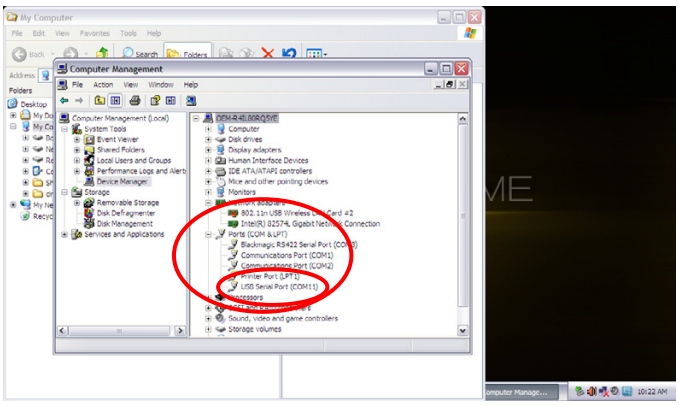
Right-click “my computer” and select “manage”



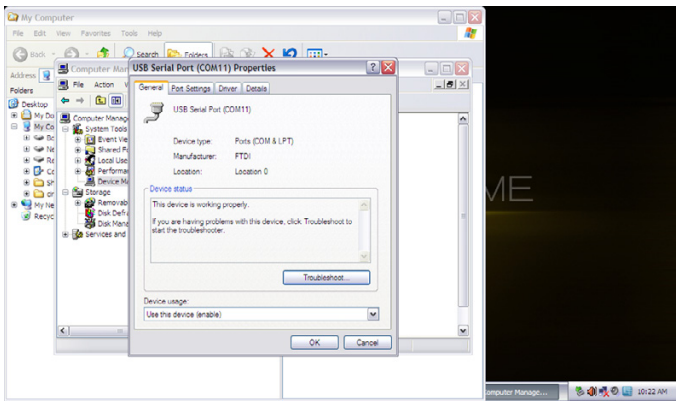
This will open the management window



Select the device manager

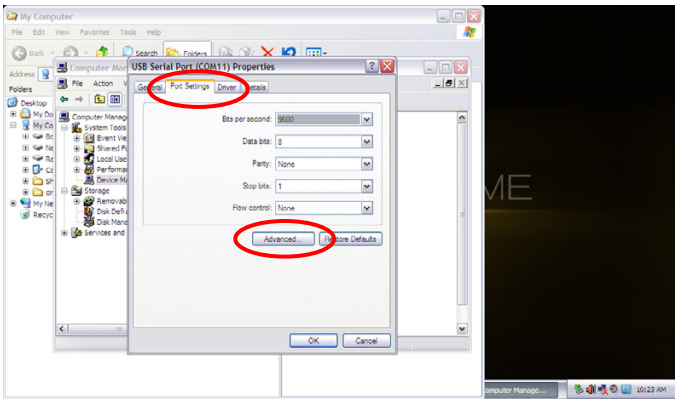


Expand the “ports (COM & LPT)” menu
Double-click the “USB serial port (COMxx)” item

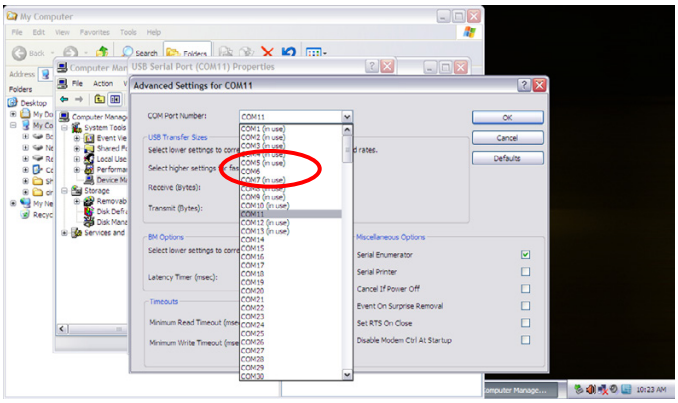


This opens the device properties window

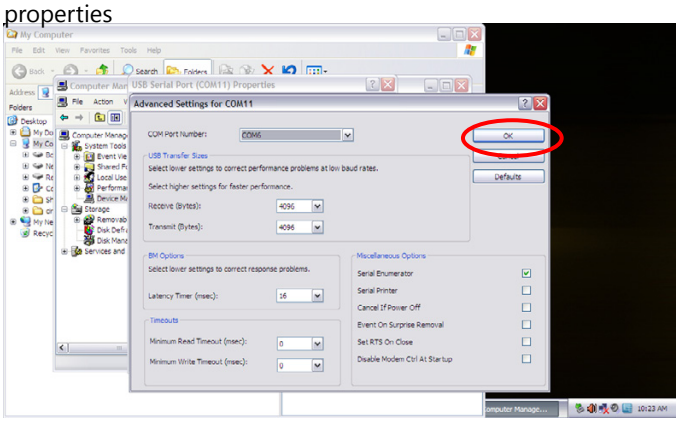
Setting the battery meter COM port, continued



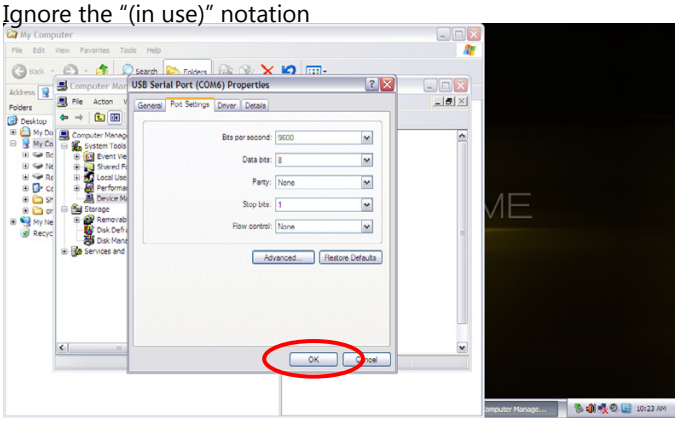
Select the “port settings” tab, then select “advanced” properties



from the “COM Port Number” pulldown, select port 6
Ignore the “(in use)” notation



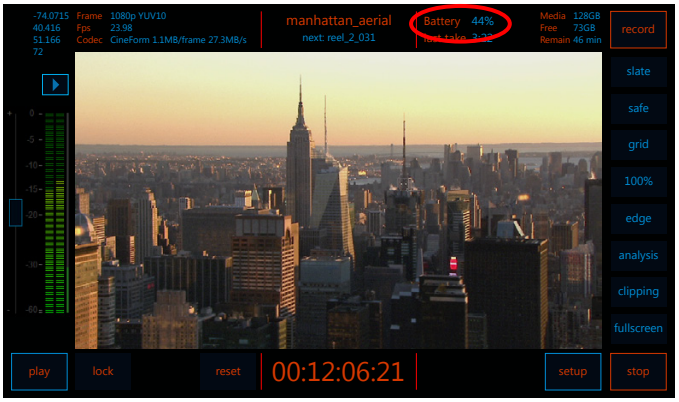
Exit the advanced settings tab by selecting “ok”



Exit the COM properties settings tab by selecting “ok”

Close the management tab, then restart the Cinedeck.

With a battery attached, open the [setup][prefs] tab, select battery type and select [battery mon]



Go back to the main UI and the battery meter should show a % value.

Average data rates

Prores

Cinedeck EXTREME	Resolution	Sample Rate	Bit Depth	Bit Rate (Mbps)	File Size (GB/min)	File Size (GB/Hour)	128 GB (-10%): 115.2 GB Minutes	256 GB (-10%): 230.4 GB Minutes	500 GB (-10%): 450 GB Minutes
ProRes 422 (Proxy)	1920x1080 24p	4:2:2 subsample	8	36	0.27	16	432	864	1687.5
ProRes 422 (LT)	1920x1080 24p	4:2:2 subsample	8	82	0.62	37	186.81	373.62	729.73
ProRes 422	1920x1080 24p	4:2:2 subsample	8	117	0.88	53	130.42	260.83	509.43
ProRes 422 (HQ)	1920x1080 24p	4:2:2 subsample	8	176	1.32	79	87.49	174.99	341.77
ProRes 4444 (excl. alpha)	1920x1080 24p	4:4:4 (Y'CbCr; R'G'B')	10	264	1.98	119	58.08	116.17	226.89
ProRes 422 (Proxy)	1920x1080 50i, 25p	4:2:2 subsample	8	38	0.28	17	406.59	813.18	1588.24
ProRes 422 (LT)	1920x1080 50i, 25p	4:2:2 subsample	8	85	0.63	38	181.89	363.79	710.53
ProRes 422	1920x1080 50i, 25p	4:2:2 subsample	8	122	0.92	55	125.67	251.35	490.91
ProRes 422 (HQ)	1920x1080 50i, 25p	4:2:2 subsample	8	184	1.38	83	83.28	166.55	325.3
ProRes 4444 (excl. alpha)	1920x1080 50i, 25p	4:4:4 (Y'CbCr; R'G'B')	10	275	2.07	124	55.74	111.48	217.74
ProRes 422 (Proxy)	1920x1080 60i, 30p	4:2:2 subsample	8	45	0.33	20	345.6	691.2	1350
ProRes 422 (LT)	1920x1080 60i, 30p	4:2:2 subsample	8	102	0.77	46	150.26	300.52	586.96
ProRes 422	1920x1080 60i, 30p	4:2:2 subsample	8	147	1.1	66	104.73	209.45	409.09
ProRes 422 (HQ)	1920x1080 60i, 30p	4:2:2 subsample	8	220	1.65	99	69.82	139.64	272.73
ProRes 4444 (excl. alpha)	1920x1080 60i, 30p	4:4:4 (Y'CbCr; R'G'B')	10	330	2.47	148	46.7	93.41	182.43
ProRes 422 (Proxy)	1920x1080 50p	4:2:2 subsample	8	76	0.57	34	203.29	406.59	794.12
ProRes 422 (LT)	1920x1080 50p	4:2:2 subsample	8	170	1.28	77	89.77	179.53	350.65
ProRes 422	1920x1080 50p	4:2:2 subsample	8	245	1.83	110	62.84	125.67	245.45
ProRes 422 (HQ)	1920x1080 50p	4:2:2 subsample	8	367	2.75	165	41.89	83.78	163.64
ProRes 4444 (excl. alpha)	1920x1080 50p	4:4:4 (Y'CbCr; R'G'B')	10	551	20.8	1248	5.54	11.08	21.63
ProRes 422 (Proxy)	1920x1080 60p	4:2:2 subsample	8	91	0.68	41	168.59	337.17	658.54
ProRes 422 (LT)	1920x1080 60p	4:2:2 subsample	8	204	1.53	92	75.13	150.26	293.48
ProRes 422	1920x1080 60p	4:2:2 subsample	8	293	2.2	132	52.36	104.73	204.55
ProRes 422 (HQ)	1920x1080 60p	4:2:2 subsample	8	440	3.3	198	34.91	69.82	136.36
ProRes 4444 (excl. alpha)	1920x1080 60p	4:4:4 (Y'CbCr; R'G'B')	10	660	4.95	297	23.27	46.55	90.91
ProRes 422 (Proxy)	2048x1152 24p	4:2:2 subsample	8	41	0.32	19	363.79	727.58	1421.05
ProRes 422 (LT)	2048x1152 24p	4:2:2 subsample	8	93	0.7	42	164.57	329.14	642.86
ProRes 422	2048x1152 24p	4:2:2 subsample	8	134	1	60	115.2	230.4	450
ProRes 422 (HQ)	2048x1152 24p	4:2:2 subsample	8	201	1.52	91	75.96	151.91	296.7
ProRes 4444 (excl. alpha)	2048x1152 24p	4:4:4 (Y'CbCr; R'G'B')	10	302	2.27	136	50.82	101.65	198.53
ProRes 422 (Proxy)	2048x1152 25p	4:2:2 subsample	8	43	0.32	19	363.79	727.58	1421.05
ProRes 422 (LT)	2048x1152 25p	4:2:2 subsample	8	97	0.73	44	157.09	314.18	613.64
ProRes 422	2048x1152 25p	4:2:2 subsample	8	140	1.05	63	109.71	219.43	428.57
ProRes 422 (HQ)	2048x1152 25p	4:2:2 subsample	8	210	1.57	94	73.53	147.06	287.23
ProRes 4444 (excl. alpha)	2048x1152 25p	4:4:4 (Y'CbCr; R'G'B')	10	315	2.37	142	48.68	97.35	190.14

Cinedeck EXTREME	Resolution	Bit Depth	Bit Rate (Mbps)	File Size (GB/min)	File Size (GB/Hour)	128 GB (-10%): 115.2 GB Minutes	256 GB (-10%): 230.4 GB Minutes	500 GB (-10%): 450 GB Minutes
Avid DNxHD 145	1920x1080 24fps	8	116	0.89	53.6	128.96	257.91	503.73
Avid DNxHD 220	1920x1080 24fps	8	176	1.35	80.7	85.65	171.3	334.57
Avid DnxHD 220x	1920x1080 24fps	10	176	1.35	80.7	85.65	171.3	334.57
Avid DNxHD 36	1920x1080 25fps	8	36	0.25	14.9	463.89	927.79	1812.08
Avid DNxHD 145	1920x1080 25fps	8	121	0.93	55.8	123.87	247.74	483.87
Avid DNxHD 220	1920x1080 25fps	8	184	1.4	84	82.29	164.57	321.43
Avid DnxHD 220x	1920x1080 25fps	10	184	1.4	84	82.29	164.57	321.43
Avid DNxHD 36	1920x1080 25p/50i	8	36	0.25	14.9	463.89	927.79	1812.08
Avid DNxHD 145	1920x1080 25p/50i	8	121	0.93	55.8	123.87	247.74	483.87
Avid DNxHD 220	1920x1080 25p/50i	8	184	1.4	84	82.29	164.57	321.43
Avid DnxHD 220x	1920x1080 25p/50i	10	184	1.4	84	82.29	164.57	321.43
Avid DNxHD 145	1920x1080 23.976fps	8	116	0.89	53.6	128.96	257.91	503.73
Avid DNxHD 220	1920x1080 23.976fps	8	176	1.34	80.6	85.76	171.51	334.99
Avid DnxHD 220x	1920x1080 23.976fps	10	176	1.34	80.6	85.76	171.51	334.99
Avid DNxHD 36	1920x1080 29.97fps	8	45	0.29	17.6	392.73	785.45	1534.09
Avid DNxHD 145	1920x1080 29.97fps	8	145	1.11	66.6	103.78	207.57	405.41
Avid DNxHD 220	1920x1080 29.97fps	8	220	1.67	100.4	68.84	137.69	268.92
Avid DnxHD 220x	1920x1080 29.97fps	10	220	1.67	100.4	68.84	137.69	268.92
Avid DNxHD 145	1920x1080 29.97p/ 59.94i	8	145	1.11	66.6	103.78	207.57	405.41
Avid DNxHD 220	1920x1080 29.97p/ 59.94i	8	220	1.67	100.4	68.84	137.69	268.92
Avid DnxHD 220x	1920x1080 29.97p/ 59.94i	10	220	1.67	100.4	68.84	137.69	268.92

Average Data Rates

Avid DNxHD

cinedeck EXTREME

Average Data Rates
CineForm

	Resolution	Chroma	Bit Depth	Bit Rate (Mbps)	File Size GB/Hour	128 GB Minutes	256 GB Minutes	500 GB Minutes
CineForm Compression Modes								
Cineform - Medium	1080 - (24p/25p/50i)	4:2:2 / RAW	10 / 12	96	43	178	356	694
Cineform - High	1080 - (24p/25p/50i)	4:2:2 / RAW	10 / 12	128	58	133	267	521
Cineform - Film Scan 1	1080 - (24p/25p/50i)	4:2:2 / RAW	10 / 12	160	72	107	213	417
Cineform - Film Scan 2	1080 - (24p/25p/50i)	4:2:2 / RAW	10 / 12	192	86	89	178	347
CineForm - Uncompressed 422	1080 - (24p/25p/50i)	4:2:2	10	995 / 1037	467	16	33	64
CineForm - Uncompressed RAW	1080 - (24p/25p)	RAW	12	600	270	28	57	111
Cineform - High	1080 - (24p/25p)	4:4:4	12	205	92	83	167	326
Cineform - Film Scan 1	1080 - (24p/25p)	4:4:4	12	256	115	67	133	260
Cineform - Film Scan 2	1080 - (24p/25p)	4:4:4	12	307	138	56	111	217
Cineform - Keyscan	1080 - (24p/25p)	4:4:4	12	369	166	46	93	181
CineForm - Uncompressed 444	1080 - (24p/25p)	4:4:4	12	1792 / 1866	840	9	18	36
Cineform - Medium	1080 - (30P / 60i)	4:2:2 / RAW	10 / 12	115	52	148	296	579
Cineform - High	1080 - (30P / 60i)	4:2:2 / RAW	10 / 12	154	69	111	222	434
Cineform - Film Scan 1	1080 - (30P / 60i)	4:2:2 / RAW	10 / 12	192	86	89	178	347
Cineform - Film Scan 2	1080 - (30P / 60i)	4:2:2 / RAW	10 / 12	230	104	74	148	289
CineForm - Uncompressed 422	1080 - (30p/60i)	4:2:2	10	1244	560	14	27	54
CineForm - Uncompressed RAW	1080 - (30p)	RAW	12	750	338	23	46	89
Cineform - High	1080 - (30P)	4:4:4	12	246	111	69	139	271
Cineform - Film Scan 1	1080 - (30P)	4:4:4	12	307	138	56	111	217
Cineform - Film Scan 2	1080 - (30P)	4:4:4	12	369	166	46	93	181
Cineform - Keyscan	1080 - (30P)	4:4:4	12	442	199	39	77	151
CineForm - Uncompressed 444	1080 - (30P)	4:4:4	12	2240	1008	7.6	15	30
Cineform - Medium	2048x1152 (24p/25p)	RAW	12	109	49	156	312	609
Cineform - High	2048x1152 (24p/25p)	RAW	12	146	66	117	234	457
Cineform - Film Scan 1	2048x1152 (24p/25p)	RAW	12	182	82	94	187	365
Cineform - Film Scan 2	2048x1152 (24p/25p)	RAW	12	219	98	78	156	305
CineForm - Uncompressed RAW	2048x1152 (24p/25p)	RAW	12	680	306	25	50	98